

OHIO E.P.A.
JUL -2 2012

BEFORE THE
OHIO ENVIRONMENTAL PROTECTION AGENCY DIRECTOR'S JOURNAL

In the Matter of:

The Ohio Valley Coal Company
56854 Pleasant Ridge Road
Alledonia, Ohio 43902

**Director's Final
Findings and Orders**

and

American Energy Corporation
43521 Mayhugh Hill Road
Twp. Hwy. 88
Beallsville, Ohio 43716

I certify this to be a true and accurate copy of the
original documents as filed in the records of the Ohio
Env. Protection Agency.

M. Shapiro 7/2/2012

Respondents

PREAMBLE

It is agreed by the parties hereto as follows:

I. JURISDICTION

These Director's Final Findings and Orders ("Orders") are issued to The Ohio Valley Coal Company and American Energy Corporation ("Respondents"), pursuant to the authority vested in the Director of the Ohio Environmental Protection Agency ("Ohio EPA") under Ohio Revised Code ("ORC") §§ 6111.03 and 3745.01.

II. PARTIES BOUND

These Orders shall apply to and be binding upon Respondents and their successors in interest liable under Ohio law. No change in ownership of Respondents or the Facilities (as hereinafter defined) shall in any way alter Respondents' obligations under these Orders.

III. DEFINITIONS

Unless otherwise stated, all terms used in these Orders shall have the same meaning as defined in ORC Chapter 6111. and the rules promulgated thereunder.

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IV. FINDINGS

The Director of Ohio EPA has made the following findings:

1. Pursuant to ORC § 6111.04(A), no person shall place or discharge, or cause to be placed or discharged, in any waters of the state any sewage, sludge, sludge materials, industrial waste, or other wastes without a valid, unexpired permit.
2. Pursuant to ORC § 6111.04(C), no person to whom a permit has been issued shall place or discharge, or cause to be placed or discharged, in any waters of the state any sewage, sludge, sludge materials, industrial waste, or other wastes in excess of the permissive discharges specified under an existing permit.
3. Pursuant to ORC § 6111.07(A), no person shall violate or fail to perform any duty imposed by ORC §§ 6111.01 to 6111.08 or violate any order, rule, or term or condition of a permit issued or adopted by the Director of Ohio EPA pursuant to those sections. Each day of violation is a separate offense.
4. In accordance with Ohio Administrative Code ("OAC") 3745-33-02(A), no person may discharge any pollutant or cause, permit, or allow a discharge of any pollutant without applying for and obtaining an Ohio NPDES permit. Pursuant to OAC 3745-33-04, NPDES permit renewal applications must be submitted at least one hundred and eighty days prior to expiration of the permit.
5. In accordance with OAC 3745-38-02(A), no person may discharge any pollutant or cause, permit, or allow a discharge of any pollutant from a point source without either applying for and obtaining an Ohio NPDES permit in accordance with OAC Chapter 3745-33, or obtaining authorization to discharge under a general NPDES permit in accordance with OAC Chapter 3745-38.
6. OAC 3745-1-04 provides, in part, that the following general water quality criteria shall apply to all surface waters of the state including mixing zones: To every extent practical and possible as determined by the Director, these waters shall be: (A) Free from suspended solids or other substances that enter the waters as a result of human activity and that will settle to form putrescent or otherwise objectionable sludge deposits, or that will adversely affect aquatic life; (C) Free from materials entering the waters as a result of human activity producing color, odor or other conditions in such a degree as to create a nuisance; and (D) Free from substances entering the waters as a result of human activity in concentrations that are toxic or harmful to human, animal or aquatic life and/or are rapidly lethal in the mixing zone.

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The Ohio Valley Coal Company Facility

7. Respondent The Ohio Valley Coal Company ("OVCC") is the owner and operator of the Powhatan No. 6 Mine, an underground coal mining operation located at 56854 Pleasant Ridge Road, Alledonia, Belmont County, Ohio ("OVCC Facility").
8. Respondent OVCC was issued National Pollutant Discharge Elimination System ("NPDES") permit, No. 0IL00046*DD. The permit became effective on July 1, 2000, with an expiration date of June 30, 2005.
9. Respondent OVCC's renewal permit application was submitted June 24, 2005. Respondent OVCC has been operating under the terms and conditions of NPDES permit No. 0IL00046*DD.
10. The permit authorized Respondent OVCC to discharge "industrial waste" and/or "other waste" and/or "sewage," as defined in ORC § 6111.01, from the Facility to Perkins Run or Captina Creek from the following outfalls:

A discharge from Powhatan No. 6 Mine of process water from the preparation plant and storm water runoff from slurry impoundment #2 into Perkins Run from outfall 001;

Sanitary wastewater from outfall 002;

Beltline area treatment pond #8 from outfall 007;

Railroad coal handling area treatment pond #7 from outfall 011;

Refuse disposal area/slurry impoundment dam runoff and leachate collection pond (and effluent from pond #014 when constructed) from outfall 013.

11. Perkins Run is a tributary of Captina Creek which flows into the Ohio River. Perkins Run, Captina Creek, and the Ohio River are "waters of the state" as that term is defined in ORC § 6111.01. Captina Creek is classified as an exceptional warm water habitat stream in Ohio Administrative Code ("OAC") 3745-1-13, Table 13-1, and is classified as an outstanding state water in OAC 3745-1-05(A)(10)(c).
12. Respondent OVCC has, on at least the dates listed in the chart attached hereto as Attachment I and incorporated by reference as if fully rewritten herein, either exceeded final effluent limitations in its NPDES permit from January 2005 through May 2012, and/or violated reporting and sampling frequency requirements from

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January 2007 through May 2012. Respondent OVCC's failure to comply with the final effluent limitations and reporting and sampling frequency requirements in its NPDES permit violates the permit and ORC §§ 6111.04 and 6111.07. Each violation cited on Attachment I constitutes a separate violation.

13. Respondent OVCC violated Part I, A.2. of its NPDES permit by failing to monitor the discharge from slurry impoundment #2, outfall 001, once per week during the third and fourth weeks of January 2008, and from February 7 through February 28, 2008.
14. Pursuant to Part I, C. of Respondent OVCC's NPDES permit, Respondent OVCC was required to install a flow meter and composite sampler capable of automatically collecting samples over a 24 hour period proportionate to the wastewater flow from slurry impoundment #2, outfall 001, in accordance with a schedule of compliance, and to complete construction and place the flow meter and composite sampler in operation as soon as possible but no later than July 1, 2001.
15. In late January 2007, Respondent OVCC notified Ohio EPA that it intended to move outfall 001, and would move the sampler and flow monitor also, noting in a February 6, 2007 email to Ohio EPA that "[w]e won't miss any discharge" in making this move. In a June 21, 2007 email to Ohio EPA, Respondent OVCC stated that "[w]e . . . need to move the sampling/monitoring building by the end of June."
16. Outfall 001 was moved in August 2007, but the composite sampler and flow meter were not re-installed at the new location until after the slurry discharge on February 28, 2008 described in Finding No. 17. The failure to install the composite sampler and flow meter at the time outfall 001 was moved in August 2007 until after February 28, 2008 is a violation of the terms and conditions of Respondent OVCC's NPDES permit and ORC § 6111.07.
17. On February 28, 2008, Respondent OVCC discharged coal slurry from the #2 slurry impoundment, NPDES permit outfall 001, into Perkins Run, Captina Creek and the Ohio River. The discharge occurred overnight during the decanting of water from the impoundment. Ohio EPA personnel observed that Captina Creek was turned black by the discharge. The discoloration lasted for at least 3 days and was noticeable for 22 miles downstream to the Ohio River.
18. The February 28, 2008 slurry discharge violated water quality standards in OAC 3745-1-04(A) and (C), and ORC §§ 6111.04 and 6111.07.
19. Ohio EPA received a letter from Respondent OVCC's counsel, dated March 3, 2008, which provided preliminary information on the cause of the slurry discharge

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from outfall 001. The letter also indicated that measures were being taken to prevent a future occurrence, including the installation of required monitoring and sampling equipment, raising the level of the dike immediately around the decant pipe, and cleaning some slurry from the ditch to minimize movement downstream when pumping is restarted.

20. On March 21, 2008, Ohio EPA sent Respondent OVCC a Notice of Violation ("NOV") for the February 28, 2008 discharge of coal slurry to Perkins Run and Captina Creek. The NOV stated that Respondent OVCC: violated Part III, 2.A and C of Respondent OVCC's NPDES permit by depositing putrescent or otherwise objectionable sludge deposits into waters of the State and discharging effluent containing substances that altered the natural color of the receiving streams; and violated its NPDES permit by failing to monitor the discharge from slurry impoundment #2, NPDES permit outfall 001, from February 7 to February 28, 2008 in accordance with its NPDES permit. The NOV also requested additional information required by the NPDES permit reporting requirements for noncompliance notification.
21. On April 4, 2008, Ohio EPA received a letter from Respondent OVCC providing the additional information requested in the March 21, 2008 NOV. The laboratory analysis of Respondent OVCC's water quality sample in Captina Creek downstream of outfall 001 indicated a violation of the NPDES permit effluent limitation for Total Suspended Solids. See Attachment II.
22. On March 5, 2008, Ohio EPA conducted a Compliance Sampling Inspection at Respondent OVCC's Powhatan No. 6 Mine. A report detailing the results of the inspection was sent to Respondent OVCC in a letter dated April 14, 2008. The letter listed several violations including, but not limited to, NPDES permit violations of effluent limitations for total iron and total manganese from pond #13, outfall 013, on the day of the inspection; NPDES permit violations of effluent limitations for CBOD5 from outfall 002 for the month of October 2007; delay in the installation of the sampler and flow meter on the new discharge location for outfall 001; failure to sample the #2 slurry impoundment discharge during the months of January and February 2008 as required by the NPDES permit; and, an unpermitted discharge of pollutants to Captina Creek in violation of ORC § 6111.04 as a result of coal fines being dragged out onto State Route 148.
23. A response to Ohio EPA's April 14, 2008 compliance inspection letter was received from Respondent OVCC on May 12, 2008.

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24. In addition to the February 28, 2008 slurry release, on at least July 10, 2007, January 2, 2006, August 1, 2004, April 22, 2000, and July 8, 1999, citizens of the area reported releases of black waters into Captina Creek from Respondent OVCC's Facility to Ohio EPA. Respondent OVCC did not report these releases as required by its NPDES permit. In addition, there was one release on August 8, 2004 that Respondent OVCC reported by letter to Ohio EPA on August 13, 2004.
25. On July 30, 2007, Ohio EPA sent Respondent OVCC an NOV regarding the July 10, 2007 release. The July 30, 2007 NOV cited violations of general effluent limitations and reporting requirements in Respondent OVCC's NPDES Permit, Parts III, 2. A. and C., and Part III, 12, and water quality standards in OAC 3745-1-04(A) and (C).
26. On August 26, 2004, Ohio EPA sent Respondent OVCC an NOV regarding the August 1, 2004 release. The August 26, 2004 NOV cited violations of water quality standards in OAC 3745-1-04(A) and (C), effluent limitations in Respondent OVCC's NPDES permit for total suspended solids from outfall 001, reporting requirements in Respondent OVCC's NPDES Permit, Part III, 12.A and Part III, 12.B, and ORC Chapter 6111.
27. On May 9, 2000, Ohio EPA sent Respondent OVCC an NOV regarding the April 22, 2000 release. The May 9, 2000 NOV cited violations of water quality standards in OAC 3745-1-04(A) and (C), Respondent OVCC's NPDES Permit and ORC 6111.
28. Respondent OVCC sent letters to Ohio EPA responding to the NOV's on August 4, 2007, January 9, 2006, August 13, 2004, and May 16, 2000. In the August 4, 2007 letter, Respondent OVCC denied that there had been a discharge of slurry on July 10, 2007.
29. Respondent OVCC has also had numerous unauthorized discharges from pond #10, which is not designed to discharge and had no permitted outfall in Respondent OVCC's NPDES permit. On at least June 5, 2010, February 11, 2009, March 5, 2008, August 8, 2007, January 6, 2005, June 17, 2000, April 22, 2000, March 30, 2000, December 14, 1999, and July 2, 1999, Respondent OVCC had unauthorized discharges from pond #10 to waters of the State.
30. Respondent OVCC reported the unauthorized discharges from pond #10 as follows: June 5, 2010 discharge by email dated June 5, 2010; February 11, 2009 discharge by letter dated April 6, 2009; August 8, 2007 discharge by submission of a sample analysis on September 11, 2007; January 6, 2005 discharge by telephone call on January 6, 2005; June 17, 2000 discharge by letter dated June 22, 2000; April 22,

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2000 discharge by letter dated April 24, 2000; March 30, 2000 discharge by letter dated April 14, 2000; December 14, 1999 discharge by letter dated January 7, 2000; and July 2, 1999 discharge by letter dated July 13, 1999.

31. Ohio EPA sent Respondent OVCC NOVs regarding the unauthorized discharges on March 31, 2009 for the February 11, 2009 discharge, April 14, 2008 for the March 5, 2008 discharge, and May 9, 2000 for the April 22, 2000 discharge.
32. Respondent OVCC submitted a Permit to Install ("PTI") application to upgrade pond #10 to prevent future discharges. Ohio EPA issued this PTI on October 9, 2009. Work has been completed in accordance with the approved PTI.

American Energy Corporation Facility

33. Respondent American Energy Corporation ("AEC") is the owner and operator of the Century Mine, an underground coal mining operation located in Washington and Wayne Townships, Belmont County, Ohio ("AEC Facility").
34. Respondent AEC was issued NPDES permit, No. 0IL00091*FD. The permit became effective on August 1, 2002, with an expiration date of July 31, 2007.
35. Respondent AEC's permit renewal application was received July 9, 2007. Respondent AEC has been operating under the terms and conditions of NPDES permit No. 0IL00091*FD.
36. The permit authorized Respondent AEC to discharge "industrial waste" and/or "other waste" and/or "sewage," as defined in ORC § 6111.01, from the Facility to Piney Creek or Captina Creek from ten different outfalls.
37. Piney Creek is a tributary of Captina Creek which flows into the Ohio River. Piney Creek, Captina Creek, and the Ohio River are "waters of the state" as that term is defined in ORC § 6111.01. Piney Creek is classified as a warm water habitat stream and Captina Creek is classified as an exceptional warm water habitat stream in Ohio Administrative Code ("OAC") 3745-1-13, Table 13-1, and is classified as an outstanding state water in OAC 3745-1-05(A)(10)(c).
38. Respondent AEC opened the Century Mine in 2002. AEC proposed a no discharge preparation plant in which all the wastewater used in the plant would be recycled and the fine refuse would be dried by filter pressing. Approximately one month after

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the preparation plant commenced operation, the filter presses failed to perform to their design specifications.

39. Between approximately June and August 2002, Respondent AEC installed and began operating a coal slurry pipeline without first obtaining a permit to install ("PTI") or plan approval from the Director. The pipeline runs from Respondent AEC's coal preparation plant at the Century Mine approximately 15,000 feet to coal slurry impoundment #2 at Respondent OVCC's Powhatan No. 6 Mine.
40. The pipeline is a "disposal system" as that term is defined in ORC § 6111.01(G).
41. The coal waste slurry flowing through the pipeline is an "industrial waste" or "other waste" as those terms are defined in ORC § 6111.01.
42. On or before August 23, 2005, a hole developed from internal erosion in a metal coupling at a bend in the pipeline near the point where the pipeline ran under the railroad and SR 148. Coal waste slurry flowed out of the hole, overflowing a maintenance pond and into Captina Creek, and affected approximately 2300 feet of Captina Creek, covering portions of the creek bottom. Cleanup of Captina Creek took eight days.
43. The slurry discharge on or around August 23, 2005 violated ORC §§ 6111.04 and 6111.07, and OAC Rules 3745-33-02(A), 3745-38-02(A), and 3745-1-04. Pursuant to Director's Final Findings and Orders issued by Ohio EPA to Respondent AEC which became effective March 22, 2007, Respondent AEC agreed to pay a civil penalty amount of fifty thousand dollars (\$50,000.00) to resolve the violations related to the 2005 slurry discharge and other violations which occurred at the AEC Facility prior to September 2005.
44. The 2007 Director's Final Findings and Orders required Respondent AEC to submit to Ohio EPA for approval a Slurry Pipeline Spill Prevention and Emergency Response Plan which: Describes steps that will be taken to prevent spills from occurring; describes devices and mechanisms that will be installed and operated to ensure that Respondent AEC is made aware of all spills from the pipeline to the greatest extent possible; establishes procedures to be followed in the event of a spill in order to ensure that spills are appropriately and immediately responded to, including but not limited to, procedures to ensure immediate appropriate notification to Ohio EPA, and Ohio Department of Natural Resources Division of Mineral Resource Management and Division of Wildlife; and establishes procedures to ensure that appropriate personnel are aware of and follow the Slurry Pipeline Spill Prevention and Emergency Response Plan and are appropriately trained.

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45. On October 1, 2010, a hole developed in Respondent AEC's coal waste slurry pipeline. Coal waste slurry from the pipeline spilled onto the ground and flowed into Captina Creek, depositing slurry into 1.5 miles of the creek, killing fish and adversely affecting habitat. The discharge from the pipeline was a point source discharge of a pollutant, as defined in OAC 3745-33-01(Z), (O), and (AA).
46. Respondent AEC discharged coal waste slurry into Captina Creek on October 1, 2010, without obtaining an Ohio NPDES permit or obtaining authorization to discharge under a general NPDES permit, in violation of ORC §§ 6111.04 and 6111.07, and OAC Rules 3745-33-02(A) and 3745-38-02(A).
47. Respondent AEC's slurry discharge on October 1, 2010 violated OAC 3745-1-04(A) by depositing substances into Captina Creek as a result of human activity that settled to form objectionable sludge deposits and that adversely affected aquatic life.
48. Respondent AEC's slurry discharge on October 1, 2010 violated OAC 3745-1-04(C) by discharging substances into Captina Creek as a result of human activity that altered the natural color or other conditions of Captina Creek in such a degree as to create a nuisance.
49. Respondent AEC's slurry discharge on October 1, 2010 violated OAC 3745-1-04(D) by causing substances to enter Captina Creek as a result of human activity in concentrations that are toxic or harmful to human, animal or aquatic life and/or are rapidly lethal in the mixing zone.
50. Respondent AEC's slurry discharge on October 1, 2010 violated OAC 3745-1-07 water quality standards for arsenic and zinc. The water quality standard for arsenic is 340 ug/l and for zinc is 390 ug/l based on outside mixing zone maximums and an in stream hardness of 400 mg/l. Analyses of samples taken by Ohio EPA on October 1, 2010 in Captina Creek at the dike above the SR 148 bridge showed arsenic as 527 ug/l and zinc as 9,810 ug/l.
51. Respondent AEC's emergency response cleanup activities were curtailed on October 29, 2010, with the concurrence of Ohio EPA, although Captina Creek remained adversely affected at that time.
52. On November 16, 2010, Ohio EPA sent Respondent AEC a Notice of Violation ("NOV") for the October 1, 2010 slurry discharge. The NOV requested that Respondent AEC submit the following:

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- a. Within fourteen days of receipt of the NOV, a final report detailing the events of the slurry spill, including what time it was discovered, when the pipeline was inspected last before discovery of the spill, volume estimates of spilled and disposed slurry, the destination of the material removed from the creek, the results of all samples taken, the cause of the spill, how long the slurry pipeline was not in use due to the pipeline repair and cleanup, and a description of the cleanup project, including how the pipeline was repaired and all cleanup related costs.
 - b. Within six months from November 16, 2010, an evaluation by an expert on pipeline evaluation of the integrity of both the slurry pipe and the return water pipe, including a determination of the thickness of the pipe walls throughout the pipelines, and a determination whether portions of the pipe are no longer capable of withstanding the pressure of transporting slurry and return water, or are potential failure zones.
 - c. Within six months from November 16, 2010, a report on a study evaluating all possible alternatives and methods to prevent future pipeline failures and spills, including but not limited to: alternative pipeline design, material, and construction options; alternative pipeline installation and routing options; and alternatives to slurry pipeline and return water lines between Respondent AEC and Respondent OVCC.
53. The NOV requested that Respondent AEC provide dates for the commencement and completion of the pipeline evaluation and submission of the report within fourteen days of receipt of the NOV, along with the requested incident report. These items should have been submitted to Ohio EPA by December 3, 2010.
54. Ohio EPA received Respondent AEC's response to the November 16, 2010 NOV on December 28, 2010. The response provided most of the information detailing the events of the spill which were requested in the November 16, 2010 NOV, but not all of them, and did not provide dates for commencement and completion of the pipeline evaluation. Respondent AEC's response further indicated that it was planning to submit a PTI application for a new slurry pipeline instead of a report on a study evaluating alternatives and methods to prevent future pipeline failures and spills.

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55. Respondent AEC's response to the November 16, 2010 NOV stated that the coal slurry spill was detected at 5:37 a.m. on October 1, 2010 during a visual inspection of the slurry line. Respondent AEC did not notify Ohio EPA of the slurry discharge until 7:30 a.m. on October 1, 2010, and did not notify Ohio EPA's Emergency Response Hotline until after the 7:30 a.m. call during which the telephone number for the Emergency Response Hotline was provided to Respondent AEC.
56. Respondent AEC violated the 2007 Director's Final Findings and Orders by: (1) Failing to immediately notify appropriate persons at Ohio EPA, even though the telephone number for Ohio EPA's Emergency Response Hotline was included in Respondent AEC's Slurry Spill Prevention Plan; and, (2) Failing to install and/or to operate "a flow monitoring and control system capable of identifying leaks in the pipeline, shutting off the flow and notifying [Respondent AEC's] responsible operator" by either "equipment that automatically shuts off the flow in the pipeline, or by an alarm system that automatically alerts an individual of a leak, which individual is on duty and in a position to both hear the alarm and immediately cause the shutoff of the flow in the pipeline, at all times that the pipeline is in operation," even though Respondent AEC's Slurry Spill Prevention Plan includes a page outlining "Flow Meter Reading Alert Response."
57. Respondent AEC has, on at least the dates listed in the chart attached hereto as Attachment III and incorporated by reference as if fully rewritten herein, either exceeded final effluent limitations in its NPDES permit from February 2006 through May 2012, and/or violated sampling frequency requirements from January 2007 through May 2012. Respondent AEC's failure to comply with the final effluent limitations and sampling frequency requirements in its NPDES permit violates the permit and ORC §§ 6111.04 and 6111.07. Each violation cited on Attachment III constitutes a separate violation.
58. Ohio EPA sent NOVs or letters to Respondent AEC notifying it of the effluent limitation violations on September 11, 2006, October 4, 2007, June 30, 2008, September 3, 2008, December 31, 2008, July 7, 2009, October 21, 2009, and September 29, 2010.
59. Respondent AEC submitted a PTI application for new slurry pipelines to Ohio EPA on March 31, 2011. The application was incomplete and Ohio EPA requested additional information on May 2, 2011. Respondent AEC submitted revisions on May 16, 2011, July 19, 2011 and July 28, 2011. The PTI application was for a pipeline system consisting of two slurry pipelines constructed of HDPE pipe, double-walled for more than 70% of their length, catchment pond and containment systems. Ohio EPA issued the PTI for this pipeline system on August 3, 2011.

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60. Installation of new slurry pipelines by Respondents as soon as possible is necessary for the protection of the environment.
61. Respondents commenced installation of the new slurry pipelines during August 2011. Respondents performed the biological sampling required by the PTI for the pipeline system and submitted the results to Ohio EPA. Respondents also submitted to Ohio EPA the conceptual adaptive management plan (AMP) required by the PTI.
62. On June 15, 2011, Ohio EPA investigated complaints about spillage of coal from railroad cars leased by Respondents. Coal was spilled along at least sixteen (16) miles of railroad track between the mines and the Village of Powhatan Point. The track parallels Captina Creek and crosses it in several locations. Coal spillage along the railroad track has been observed by Ohio EPA on other occasions including but not limited to July 6, 2011, August 6, 2011, and October 25, 2011. Respondents acknowledged that a number of the leased railroad cars developed a structural problem, causing coal to spill out as trains carrying coal traveled along the track and requiring repair to prevent coal spillage. Respondents have notified the lessor of the railroad cars and worked with the lessor to create a repair program that is continuing and will continue until the problem is resolved. The spilled coal is "industrial waste" or "other waste," as defined in ORC § 6111.01. The spillage of coal along the railroad track is a violation of ORC §§ 6111.04 and 6111.07. Each day of violation is a separate offense.
63. These Orders do not constitute authorization or approval of the construction of any physical structure or facilities, or the modification of any existing treatment works or sewer system. Any such construction or modification is subject to the plan approval and PTI requirements of ORC §§ 6111.44 and 6111.45 and OAC Rule 3745-42.
64. Compliance with ORC Chapter 6111 is not contingent upon the availability or receipt of financial assistance.
65. The Director has given consideration to and based his determination on, evidence relating to the technical feasibility and economic reasonableness of complying with these Orders and to evidence relating to conditions calculated to result from compliance with these Orders, and its relation to the benefits to the people of the State to be derived from such compliance in accomplishing the purposes of ORC Chapter 6111.

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V. ORDERS

The Ohio Valley Coal Company Facility

1. Within ninety (90) days after the effective date of these Orders, Respondent OVCC shall submit to Ohio EPA for approval in accordance with Section X. of these Orders, a Slurry Release Prevention and Emergency Response Plan ("SRPERP") for the OVCC Facility that identifies measures to protect public health and the environment. In this plan, Respondent OVCC shall, at a minimum:
 - a. Describe steps that will be taken to prevent slurry releases from occurring.
 - b. Describe devices and mechanisms that will be installed and operated to ensure that Respondent OVCC is made aware of all slurry releases.
 - c. Establish procedures to be followed in the event of a slurry release in order to ensure that such releases are appropriately and immediately responded to. These procedures shall include procedures to ensure appropriate and prompt (within thirty minutes of first discovery if possible) notification to the Ohio EPA, Ohio Department of Natural Resources Division of Mineral Resource Management and Division of Wildlife, and the public (if public safety is threatened), and a follow-up report within twenty-four (24) hours. These procedures should be developed in consultation with potentially affected entities.
 - d. Incorporate and implement the Pollution Contingency Plan for Areas Occupied by Eastern Hellbenders section of the Eastern Hellbender Conservation Plan prepared by the Ohio Department of Natural Resources ("ODNR"). At a minimum, to further the objectives of the Eastern Hellbender Conservation Plan, Respondent shall bring an expert authorized under Ohio law to handle Eastern Hellbenders on site to implement the Pollution contingency Plan if a slurry release occurs.
 - e. Establish procedures to ensure that appropriate personnel are aware of and follow the SRPERP and are appropriately trained. Respondent OVCC shall maintain documentation of this training. This documentation shall be available for review and inspection by Ohio EPA personnel.

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2. If Ohio EPA requests that Respondent OVCC revise the SRPERP submitted in accordance with Order No. 1, Respondent OVCC shall submit to Ohio EPA a revised SRPERP or other written response to Ohio EPA's suggested revisions within thirty (30) days after receiving Ohio EPA's suggested revisions.
3. The Director shall approve or disapprove Respondent OVCC's SRPERP and such decision shall constitute an appealable final action. Within thirty (30) days after approval of the SRPERP by the Ohio EPA, Respondent OVCC shall implement the SRPERP. Within fifteen (15) days of implementation of the SRPERP, Respondent OVCC shall notify Ohio EPA in accordance with Section X. of these Orders.
4. Respondent OVCC shall annually review its SRPERP and update it as needed. Respondent OVCC shall submit a copy of any amendments or revisions to the SRPERP to Ohio EPA in accordance with Section X. of these Orders. Ohio EPA shall provide written notification to Respondent OVCC of acceptance or rejection of any amendments or revisions to the SRPERP. If an amendment or revision is rejected, Respondent OVCC shall submit to Ohio EPA, in accordance with Section X. of these Orders, a revised amendment or revision or other response to the SRPERP within thirty (30) days of receipt of written notification of the rejection. The Director shall approve or disapprove Respondent's response to the Ohio EPA's request for revised amendments or revisions to the SRPERP and such decision shall constitute an appealable final action. This annual review and update requirement does not prohibit Respondent OVCC from making improvements to the SRPERP on a more frequent than annual basis.
5. Respondent OVCC shall continue to implement the SRPERP, as updated in accordance with Order No. 4, as long as Powhatan No. 6 Mine is being operated and/or until the slurry impoundment is reclaimed.
6. Respondent OVCC shall operate and maintain a 24-hour composite sampler and recording flow meter at the #2 slurry impoundment outfall 001.
7. Respondent OVCC shall operate and maintain a continuous turbidity meter at the pump that pumps water to the #2 slurry impoundment outfall 001. Respondent OVCC shall submit a monthly report showing the daily maximum turbidity value to Ohio EPA in accordance with Section X. of these Orders. The report shall be submitted by the 20th of the following month.

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8. Respondent OVCC shall operate and maintain a turbidity meter equipped with an automatic pump shut-off feature to stop discharge in the event coal slurry reaches the pump at the #2 slurry impoundment outfall 001.
9. Within thirty (30) days of the effective date of these Orders, Respondent OVCC shall submit, in accordance with Section X. of these Orders, a PTI application to Ohio EPA and will apply to ODNR for the necessary revision to its mining permit to allow construction of a pipe, weir and/or other necessary physical modifications of outfall 013, the pond at the toe of the #2 dam, to accommodate the installation, operation, and maintenance of a 24-hour composite sampler and recording flow meter at outfall 013. OVCC shall complete the necessary modification of the outfall and install the 24-hour composite sampler and recording flow meter within 60 days of ODNR's approval of the permit revision and issuance of the PTI by Ohio EPA. The 24-hour composite sampler and recording flow meter shall be operated and maintained until this outfall is removed.
 - a. Respondent OVCC shall notify Ohio EPA in accordance with Section X. of these Orders within fifteen (15) days of commencing operation of the sampler and flow meter;
 - b. Respondent OVCC shall maintain a log book or electronic record to record pond maintenance, including repairs and treatment additives. The log book or electronic record shall, at a minimum, include the date, name of employee, and type and amount of chemical treatment or other maintenance performed;
 - c. Respondent OVCC shall maintain the log book or electronic record on site for Ohio EPA's review in accordance with its NPDES permit and renewal thereof.
10. Within twelve (12) months after the effective date of these Orders, Respondent OVCC shall commence a study to determine whether the performance and design of the pond and chemical treatment provided to pond #13 is adequate to assure that the discharge from the pond complies with current NPDES permit effluent limitations, unless this pond and outfall are removed.
 - a. The study shall include ninety (90) consecutive days of grab sampling of the influent and 24-hour composite sampling of the discharge from pond #13.

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- b. The study shall be submitted to Ohio EPA, in accordance with Section X. of these Orders, within eighteen (18) months after the effective date of these Orders for review and comment by Ohio EPA.
 - c. If the study shows that additional treatment is needed, Respondent OVCC shall submit a complete and approvable PTI application with detailed plans for the additional treatment, and a schedule for installation of the additional treatment.
 - d. Upon issuance of the PTI, Respondent OVCC shall install the additional treatment in accordance with the approved PTI and approved schedule.
 - e. Respondent shall notify Ohio EPA in accordance with Section X. of these Orders within fifteen (15) days of completion of installation of the additional treatment.
11. Respondent OVCC shall immediately comply with the terms and conditions of NPDES permit No. 0IL00046*DD, and with the terms and conditions of any modified, renewed or new NPDES permit.
12. Respondent OVCC shall pay the amount of one hundred eighty-four thousand dollars (\$184,000.00) in settlement of Ohio EPA's claims for civil penalties, which may be assessed pursuant to ORC Chapter 6111. Within thirty (30) days after the effective date of these Orders, payment to Ohio EPA shall be made by an official check made payable to "Treasurer, State of Ohio" for one hundred eighty-four thousand dollars (\$184,000.00). The official check shall be submitted to Brenda Case, or her successor, together with a letter identifying Respondent OVCC, to:

Office of Fiscal Administration
Ohio Environmental Protection Agency
P.O. Box 1049
Columbus, Ohio 43216-1049

A photocopy of the check shall be sent to Ohio EPA's Southeast District Office in accordance with Section X of these Orders, and to Mark Mann, Enforcement Manager, Storm Water and Enforcement Section, or his successor, at the following address:

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Ohio Environmental Protection Agency
Division of Surface Water
P.O. Box 1049
Columbus, Ohio 43216-1049

American Energy Corporation Facility

13. Respondent AEC shall maintain permanent vegetative cover on the disturbed areas between ponds #13 and #14 unless the areas are actively being used for disposal of coarse refuse.
14. Within forty-five (45) days of the effective date of these Orders, Respondent AEC shall investigate whether run-off from the coal pile area is bypassing the ponds and discharging directly into Piney Creek and, if so, options for preventing such bypass, and submit to Ohio EPA in accordance with Section X. of these Orders, a plan for implementing the option it selects and a time schedule for implementation. The Director shall approve or disapprove Respondent AEC's plan and such decision shall constitute an appealable final action. Respondent AEC shall implement the plan in accordance with the time schedule upon approval by the Director.
15. Within ninety (90) days after the effective date of these Orders, Respondents shall submit to Ohio EPA, in accordance with Section X. of these Orders, for approval, a revised SRPERP for the AEC Facility that identifies measures to protect public health and the environment. In this plan, Respondents shall, at a minimum:
 - a. Describe steps that will be taken to prevent slurry releases from occurring.
 - b. Describe devices and mechanisms that will be installed and operated to ensure that Respondents are made aware of all slurry releases, including at a minimum, pressure and flow monitoring, and a detection and warning system which includes procedures and/or mechanisms for shut down of the slurry piping system.
 - c. Establish procedures to be followed in the event of a slurry release in order to ensure that such releases are appropriately and immediately responded to. These procedures shall include procedures to ensure appropriate and prompt (within thirty minutes of first discovery if possible) notification to the Ohio EPA, Ohio Department of Natural Resources Division of Mineral Resource Management and Division of

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Wildlife, and the public (if public safety is threatened), and a follow-up report within twenty-four (24) hours. These procedures should be developed in consultation with potentially affected entities.

- d. Incorporate and implement the Pollution Contingency Plan for Areas Occupied by Eastern Hellbenders section of the Eastern Hellbender Conservation Plan prepared by the Ohio Department of Natural Resources ("ODNR"). At a minimum, to further the objectives of the Eastern Hellbender Conservation Plan, Respondent shall bring an expert authorized under Ohio law to handle Eastern Hellbenders on site to implement the Pollution contingency Plan if a slurry release occurs.
 - e. Establish procedures to ensure that appropriate personnel are aware of and follow the Slurry Release Prevention and Emergency Response Plan and are appropriately trained. Respondents shall maintain documentation of this training. This documentation shall be available for review and inspection by Ohio EPA personnel.
16. If Ohio EPA requests that Respondents revise the SRPERP submitted in accordance with Order No. 15, Respondents shall submit to Ohio EPA a revised SRPERP or other written response to Ohio EPA's suggested revisions within thirty (30) days after receiving Ohio EPA's suggested revisions.
17. The Director shall approve or disapprove Respondent AEC's SRPERP and such decision shall constitute an appealable final action. Within thirty (30) days after approval of the SRPERP by the Ohio EPA, Respondents shall implement the SRPERP. Within fifteen (15) days of implementation of the SRPERP, Respondents shall notify Ohio EPA in accordance with Section X. of these Orders.
18. Respondents shall annually review Respondent AEC's SRPERP and update it as needed. Respondents shall submit a copy of any amendments or revisions to the SRPERP to Ohio EPA in accordance with Section X. of these Orders. Ohio EPA shall provide written notification to Respondents of acceptance or rejection of any amendments or revisions to the SRPERP. If an amendment or revision is rejected, Respondents shall submit to Ohio EPA, in accordance with Section X. of these Orders, a revised amendment or revision or other response to the SRPERP within thirty (30) days of receipt of written notification of the rejection. The Director shall approve or disapprove Respondents' response to the Ohio EPA's request for revised amendments or revisions to the SRPERP and such decision shall constitute an appealable final action. This annual review and update requirement does not

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prohibit Respondents from making improvements to the SRPERP on a more frequent than annual basis.

19. Respondents shall continue to implement the Slurry Release Prevention and Emergency Response Plan, as updated in accordance with Order No. 18, as long as the coal waste slurry pipeline is being operated.
20. On or before the effective date of these Orders, Respondents shall submit to Ohio EPA in accordance with Section X. of these Orders a copy of any evaluation of the integrity of the slurry pipeline that failed and the return water pipeline.
21. Respondents shall install the new pipelines designed with double-walled features in accordance with the approved permits and approved schedule. Respondents shall notify Ohio EPA in accordance with Section X. of these Orders within fifteen (15) days of completion of installation and successful testing of the new pipelines.
22. Respondents shall comply with all terms and conditions of the approved Section 401 Water Quality Certification for the installation of the pipelines.
23. Respondents shall immediately comply with the terms and conditions of NPDES permit No. 01L00091*GD, and with the terms and conditions of any modified, renewed or new NPDES permit.
24. Respondents shall pay the amount of one hundred eighty-four thousand dollars (\$184,000.00) in settlement of Ohio EPA's claims for civil penalties, which may be assessed pursuant to ORC Chapter 6111. Within thirty (30) days after the effective date of these Orders, payment to Ohio EPA shall be made by an official check made payable to "Treasurer, State of Ohio" for one hundred eighty-four thousand dollars (\$184,000.00). The official check shall be submitted to Brenda Case, or her successor, together with a letter identifying Respondent AEC, to:

Office of Fiscal Administration
Ohio Environmental Protection Agency
P.O. Box 1049
Columbus, Ohio 43216-1049

A photocopy of the check shall be sent to Ohio EPA's Southeast District Office in accordance with Section X of these Orders, and to Mark Mann, Enforcement Manager, Storm Water and Enforcement Section, or his successor, at the following address:

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Ohio Environmental Protection Agency
Division of Surface Water
P.O. Box 1049
Columbus, Ohio 43216-1049

Both Facilities

25. Within sixty (60) days of the effective date of these Orders, Respondents shall work with the railroad to ensure removal of all the coal along the railroad tracks between the AEC Century Mine tipple and the Ohio Valley Transloading Facility at Powhatan Harbor and either reuse or properly dispose of the coal. Respondents shall notify Ohio EPA in accordance with Section X. of these Orders within fifteen (15) days of completion of this requirement.
26. Respondents shall not use railroad cars they know or suspect are leaking coal, shall continue their efforts with the owner of the defective rail cars to make repairs necessary to prevent coal from leaking from railroad cars transporting the coal, and shall work with the railroad to expeditiously clean up any coal which does leak from railroad cars.
27. Respondents shall direct wastewater from their coal preparation plants and runoff from the refuse piles and coal stockpiles to treatment ponds for treatment prior to discharge in accordance with the Facilities' NPDES permits.
28. Respondents shall install discrete outfall channels/pipes and implement flow monitoring procedures at all NPDES permitted ponds discharging to surface waters in accordance with the following:
 - a. Within ninety (90) days of the effective date of these Orders, Respondents shall submit to ODNR, with a copy to Ohio EPA in accordance with Section X. of these Orders, a recommended plan and time schedule for the construction of engineered outfall channels in accordance with Ohio Department of Natural Resources Division of Mineral Resource Management ("ODNR") engineering requirements applicable to pond design.
 - b. If requested by ODNR, Respondents shall submit revisions to the recommended plan and time schedule for outfall channels/pipes within sixty (60) days of receipt of ODNR's requested revisions.

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- c. Disputes between Respondents and the ODNR over the plan are appealable to the extent allowed by Ohio Revised Code § 1513.13. Absent an appeal or following the conclusion of an appeal, Respondents shall implement the approved plan for the construction of engineered outfall channels in accordance with the approved time schedule upon notification from ODNR that they are acceptable.
 - d. Unless flow monitoring procedures are included in Respondents' NPDES permits or renewals or modifications thereof, within ninety (90) days of the effective date of these Orders, Respondents shall submit to Ohio EPA, in accordance with Section X. of these Orders, with a copy to ODNR, a recommended plan and time schedule for the implementation of flow monitoring procedures, using as guidance the U.S. EPA document "Performing Quality Flow Measurements at Mine Sites" (September 2001, EPA/600/R-01/043).
 - e. If requested by Ohio EPA, Respondents shall submit revisions to the recommended plan and time schedule for implementation of flow monitoring procedures within sixty (60) days of receipt of Ohio EPA's requested revisions.
 - f. The Director shall approve or disapprove Respondents' plan for flow monitoring and such decision shall constitute an appealable final action. Respondents shall implement the recommended plan for the flow monitoring procedures in accordance with the time schedule specified in the plan.
29. Respondents shall operate wastewater treatment works at the Facilities, including the ponds. Proper operation and maintenance shall include maintaining adequate freeboard, controlling erosion and ensuring adequate capacity.
- a. Within thirty (30) days of the effective date of these Orders, Respondents shall evaluate the following for each pond:
 - i. Capacity and detention requirements for the pond's tributary area.
 - ii. The capacity of the existing pond below the primary spillway.
 - iii. Current maximum available water depth of the pond.
 - iv. Current surface water elevation in the pond.

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- b. Within ninety (90) days of the effective date of these Orders, Respondents shall submit to ODNR via an Application to Revise ("ARP"), with a copy to Ohio EPA in accordance with Section X. of these orders, a design proposing any needed remedial actions to ensure the ponds have adequate freeboard and storage capacity and include a time schedule to implement the remedial actions, and, if required by Ohio EPA, shall submit to Ohio EPA, in accordance with Section X. of these Orders, a PTI application and detailed plans for the proposed remedial actions, including the time schedule for implementation. The remedial actions shall comply with all local, state and federal regulations.
 - c. If requested by Ohio EPA, Respondents shall submit revisions to the recommended plan and time schedule within thirty (30) days of receipt of Ohio EPA's requested revisions.
 - d. Respondents shall implement the recommended plan in accordance with the time schedule upon issuance of a PTI by Ohio EPA if required by Ohio EPA, and approval of the ARP by ODNR.
 - e. Respondents shall submit a set of as-built plans for the ponds to Ohio EPA in accordance with Section X. of these Orders.
30. Respondents shall submit and implement management plans for their treatment ponds in accordance with their NPDES permits and any renewals and modifications thereof.

VI. TERMINATION

Respondents' obligations under these Orders shall terminate when the obligations are incorporated into Respondent OVCC's and/or Respondent AEC's NPDES permit, as applicable, and the permit becomes effective, and/or when Respondent OVCC and/or Respondent AEC certifies in writing and demonstrates to the satisfaction of Ohio EPA that Respondent OVCC and/or Respondent AEC has performed all obligations under these Orders and the Chief of Ohio EPA's Division of Surface Water acknowledges, in writing, the termination of these Orders, whichever is earlier. If Ohio EPA does not agree that all obligations have been performed, then Ohio EPA will notify Respondent OVCC and/or Respondent AEC of the obligations that have not been performed, in which case Respondent OVCC and/or Respondent AEC shall have an opportunity to address any such deficiencies and seek termination as described above. Notwithstanding the above, Orders

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Nos. 4-9, 18-19, and 26-27 shall not terminate unless termination is specifically agreed to in writing by the parties hereto, or unless the requirements are incorporated into the terms and conditions of Respondent OVCC's and/or Respondent AEC's NPDES permit, as applicable.

The certification shall contain the following attestation: "I certify that the information contained in or accompanying this certification is true, accurate and complete."

This certification shall be submitted by Respondent OVCC and/or Respondent AEC to Ohio EPA and shall be signed by a responsible official of Respondent OVCC and/or AEC as appropriate. For purposes of these Orders, a responsible official is defined in OAC Rule 3745-33-03(E).

VII. OTHER CLAIMS

Nothing in these Orders shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership or corporation, not a party to these Orders, for any liability arising from, or related to activities occurring on or at either the OVCC Facility or the AEC Facility.

VIII. OTHER APPLICABLE LAWS

All actions required to be taken pursuant to these Orders shall be undertaken in accordance with the requirements of all applicable local, state and federal laws and regulations. These Orders do not waive or compromise the applicability and enforcement of any other statutes or regulations applicable to Respondent OVCC or Respondent AEC or their Facilities.

IX. MODIFICATIONS

These Orders may be modified by agreement of the parties hereto. Modifications shall be in writing and shall be effective on the date entered in the journal of the Director of Ohio EPA.

X. NOTICE

All documents required to be submitted by Respondents pursuant to these Orders shall be addressed to:

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Ohio Environmental Protection Agency
Southeast District Office
Division of Surface Water
2195 Front Street
Logan, Ohio 43138
Attn: Enforcement Supervisor

XI. RESERVATION OF RIGHTS

Ohio EPA and Respondents reserve all rights, privileges and causes of action, except as specifically waived in Section XII. of these Orders.

XII. WAIVER

In order to resolve disputed claims, without admission of fact, violation or liability, and in lieu of further enforcement action by Ohio EPA for only the violations specifically cited in these Orders, Respondents consent to the issuance of these Orders and agree to comply with these Orders. Compliance with these Orders shall be a full accord and satisfaction for Respondents' civil liability for the violations specifically cited herein.

Respondents OVCC and AEC reserve all rights with respect to any future proposed modification, renewal or new NPDES permits and their terms and conditions with respect to Respondents' rights to comment, negotiate or appeal those terms and conditions except for those matters agreed to by Respondents in these Orders that are or will be incorporated into such NPDES permits.

Respondents hereby waive the right to appeal the issuance, terms and conditions, and service of these Orders, and Respondents hereby waive any and all rights Respondents may have to seek administrative or judicial review of these Orders either in law or equity.

Notwithstanding the preceding, Ohio EPA and Respondents agree that if these Orders are appealed by any other party to the Environmental Review Appeals Commission, or any court, Respondents retain the right to intervene and participate in such appeal. In such an event, Respondents shall continue to comply with these Orders notwithstanding such appeal and intervention unless these Orders are stayed, vacated or modified.

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XIII. EFFECTIVE DATE

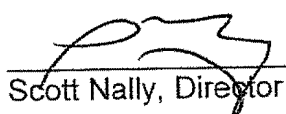
The effective date of these Orders is the date these Orders are entered into the Ohio EPA Director's journal.

XIV. SIGNATORY AUTHORITY

Each undersigned representative or a party to these Orders certifies that he or she is fully authorized to enter into these Orders and to legally bind such party to these Orders.

IT IS SO ORDERED AND AGREED:

Ohio Environmental Protection Agency



Scott Nally, Director

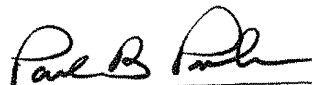
JUL 02 2012

Date

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IT IS SO AGREED:

The Ohio Valley Coal Company



Signature

6/21/12
Date

Paul B. Piccolini

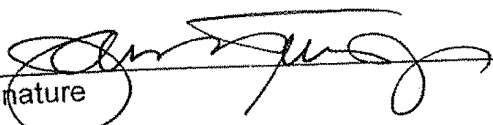
Printed or Typed Name

Vice President

Title

IT IS SO AGREED:

American Energy Corporation



Signature

6/21/12
Date

James R. Turner, Jr.

Printed or Typed Name

Treasurer

Title

[illegible]

013	Manganese, Total	30D Conc	ug/l	2000	2450	9/1/2009
February 2010						
013	Total Suspended Solids	30D Conc	mg/l	35	35.7	2/1/2010
013	Total Suspended Solids	1D Conc	mg/l	70	72	2/4/2010
January 2012						
013	Manganese, Total	30D Conc	ug/l	2000	2180	1/1/2012

Ohio EPA Sampling During a CSI on 3/5/08 Yielded the Following Effluent Violations:

013	Iron, Total	1D Conc	ug/L	7000	17,700	3/5/08
013	Manganese, Total	1D Conc	ug/L	4000	4640	3/5/08
010	Iron, Total	1D Conc	ug/L	7000	19,700	3/5/08

Ohio EPA Sampling of Captina Creek Below the Discharge of Outfall 001 During the 2/28/08 Release:

001	Total Suspended Solids	1D Conc	mg/L	70	521	2/28/08
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OHIO VALLEY COAL FREQUENCY VIOLATIONS 1/1/2007 – 6/1/2012

Permit No	Reporting Period	Station	Parameter	Sample Frequency	Expected	Reported	Violation Date
OIL00046*DD	March 2007	013	Mercury, Total	1/Quarter	1	0	03/01/2007
OIL00046*DD	March 2007	013	Copper, Total (Cu)	1/Quarter	1	0	03/01/2007
OIL00046*DD	March 2007	013	Lead, Total (Pb)	1/Quarter	1	0	03/01/2007
OIL00046*DD	March 2007	013	Cadmium, Total (Cd)	1/Quarter	1	0	03/01/2007
OIL00046*DD	March 2007	013	Residue, Total Dissolv	1/Quarter	1	0	03/01/2007
OIL00046*DD	March 2007	013	Sulfate, (SO4)	1/Quarter	1	0	03/01/2007
OIL00046*DD	March 2007	013	Arsenic, Total (As)	1/Quarter	1	0	03/01/2007
OIL00046*DD	March 2007	013	Selenium, Total (Se)	1/Quarter	1	0	03/01/2007
OIL00046*DD	March 2007	013	Zinc, Total	1/Quarter	1	0	03/01/2007
OIL00046*DD	March 2007	013	Chromium, Total	1/Quarter	1	0	03/01/2007
OIL00046*DD	April 2007	007	Total Suspended Solids	1/2Weeks	1	0	04/15/2007
OIL00046*DD	April 2007	007	pH	1/2Weeks	1	0	04/15/2007
OIL00046*DD	April 2007	007	Iron, Total (Fe)	1/2Weeks	1	0	04/15/2007
OIL00046*DD	April 2007	007	Manganese, Total (Mn)	1/2Weeks	1	0	04/15/2007
OIL00046*DD	April 2007	011	Total Suspended Solids	1/2Weeks	1	0	04/15/2007
OIL00046*DD	April 2007	011	pH	1/2Weeks	1	0	04/15/2007
OIL00046*DD	April 2007	011	Iron, Total (Fe)	1/2Weeks	1	0	04/15/2007
OIL00046*DD	April 2007	011	Manganese, Total (Mn)	1/2Weeks	1	0	04/15/2007
OIL00046*DD	April 2007	002	Odor, Severity	1/Day	1	0	04/29/2007
OIL00046*DD	April 2007	002	Turbidity, Severity	1/Day	1	0	04/29/2007
OIL00046*DD	May 2007	002	Total Suspended Solids	2/Week	2	1	05/22/2007
OIL00046*DD	May 2007	002	Dissolved Oxygen	2/Week	2	1	05/22/2007
OIL00046*DD	June 2007	013	Copper, Total (Cu)	1/Quarter	1	0	06/01/2007
OIL00046*DD	June 2007	013	Lead, Total (Pb)	1/Quarter	1	0	06/01/2007
OIL00046*DD	June 2007	013	Cadmium, Total (Cd)	1/Quarter	1	0	06/01/2007
OIL00046*DD	June 2007	013	Residue, Total Dissolv	1/Quarter	1	0	06/01/2007
OIL00046*DD	June 2007	013	Sulfate, (SO4)	1/Quarter	1	0	06/01/2007
OIL00046*DD	June 2007	013	Arsenic, Total (As)	1/Quarter	1	0	06/01/2007
OIL00046*DD	June 2007	013	Selenium, Total (Se)	1/Quarter	1	0	06/01/2007
OIL00046*DD	June 2007	013	Zinc, Total	1/Quarter	1	0	06/01/2007
OIL00046*DD	June 2007	013	Chromium, Total	1/Quarter	1	0	06/01/2007
OIL00046*DD	June 2007	013	Mercury, Total	1/Quarter	1	0	06/01/2007
OIL00046*DD	August 2007	001	Total Suspended Solids	1/Week	1	0	08/08/2007
OIL00046*DD	August 2007	001	pH	1/Week	1	0	08/08/2007
OIL00046*DD	August 2007	001	Iron, Total (Fe)	1/Week	1	0	08/08/2007
OIL00046*DD	August 2007	001	Manganese, Total (Mn)	1/Week	1	0	08/08/2007
OIL00046*DD	August 2007	001	Total Suspended Solids	1/Week	1	0	08/15/2007
OIL00046*DD	August 2007	001	pH	1/Week	1	0	08/15/2007
OIL00046*DD	August 2007	001	Iron, Total (Fe)	1/Week	1	0	08/15/2007
OIL00046*DD	August 2007	001	Manganese, Total (Mn)	1/Week	1	0	08/15/2007
OIL00046*DD	August 2007	011	Total Suspended Solids	1/2Weeks	1	0	08/15/2007
OIL00046*DD	August 2007	011	pH	1/2Weeks	1	0	08/15/2007
OIL00046*DD	August 2007	011	Iron, Total (Fe)	1/2Weeks	1	0	08/15/2007
OIL00046*DD	August 2007	011	Manganese, Total (Mn)	1/2Weeks	1	0	08/15/2007
OIL00046*DD	August 2007	001	Total Suspended Solids	1/Week	1	0	08/22/2007
OIL00046*DD	August 2007	001	pH	1/Week	1	0	08/22/2007
OIL00046*DD	August 2007	001	Iron, Total (Fe)	1/Week	1	0	08/22/2007
OIL00046*DD	August 2007	001	Manganese, Total (Mn)	1/Week	1	0	08/22/2007

OIL00046*DD	October 2007	007	pH	1/2Weeks	1	0	10/01/2007
OIL00046*DD	October 2007	007	Iron, Total (Fe)	1/2Weeks	1	0	10/01/2007
OIL00046*DD	October 2007	007	Manganese, Total (Mn)	1/2Weeks	1	0	10/01/2007
OIL00046*DD	January 2008	001	Total Suspended Solids	1/Week	1	0	01/01/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/01/2008
OIL00046*DD	January 2008	001	pH	1/Week	1	0	01/01/2008
OIL00046*DD	January 2008	001	Iron, Total (Fe)	1/Week	1	0	01/01/2008
OIL00046*DD	January 2008	001	Manganese, Total (Mn)	1/Week	1	0	01/01/2008
OIL00046*DD	January 2008	002	Nitrogen, Ammonia (NH3)	2/Week	2	1	01/01/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/02/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/03/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/04/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/05/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/06/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/07/2008
OIL00046*DD	January 2008	001	Total Suspended Solids	1/Week	1	0	01/08/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/08/2008
OIL00046*DD	January 2008	001	pH	1/Week	1	0	01/08/2008
OIL00046*DD	January 2008	001	Iron, Total (Fe)	1/Week	1	0	01/08/2008
OIL00046*DD	January 2008	001	Manganese, Total (Mn)	1/Week	1	0	01/08/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/09/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/10/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/11/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/12/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/13/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/14/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/15/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/16/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/17/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/18/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/19/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/20/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/24/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/25/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/26/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/27/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/28/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/29/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/30/2008
OIL00046*DD	January 2008	001	Flow Rate	1/Day	1	0	01/31/2008
OIL00046*DD	February 2008	011	pH	1/2Weeks	1	0	02/15/2008
OIL00046*DD	February 2008	011	Iron, Total (Fe)	1/2Weeks	1	0	02/15/2008
OIL00046*DD	February 2008	011	Manganese, Total (Mn)	1/2Weeks	1	0	02/15/2008
OIL00046*DD	February 2008	011	Total Suspended Solids	1/2Weeks	1	0	02/15/2008
OIL00046*DD	May 2008	002	CBOD 5 day	1/2Weeks	1	0	05/01/2008
OIL00046*DD	May 2008	011	Total Suspended Solids	1/2Weeks	1	0	05/01/2008
OIL00046*DD	May 2008	011	pH	1/2Weeks	1	0	05/01/2008
OIL00046*DD	May 2008	011	Iron, Total (Fe)	1/2Weeks	1	0	05/01/2008
OIL00046*DD	May 2008	011	Manganese, Total (Mn)	1/2Weeks	1	0	05/01/2008
OIL00046*DD	May 2008	001	Total Suspended Solids	1/Week	1	0	05/01/2008
OIL00046*DD	May 2008	001	pH	1/Week	1	0	05/01/2008

OIL00046*DD	May 2008	001	Iron, Total (Fe)	1/Week	1	0	05/01/2008
OIL00046*DD	May 2008	001	Manganese, Total (Mn)	1/Week	1	0	05/01/2008
OIL00046*DD	May 2008	001	Total Suspended Solids	1/Week	1	0	05/08/2008
OIL00046*DD	May 2008	001	pH	1/Week	1	0	05/08/2008
OIL00046*DD	May 2008	001	Iron, Total (Fe)	1/Week	1	0	05/08/2008
OIL00046*DD	May 2008	001	Manganese, Total (Mn)	1/Week	1	0	05/08/2008
OIL00046*DD	May 2008	002	Nitrogen, Ammonia (NH3)	1/2Weeks	1	0	05/15/2008
OIL00046*DD	May 2008	001	Total Suspended Solids	1/Week	1	0	05/22/2008
OIL00046*DD	May 2008	001	pH	1/Week	1	0	05/22/2008
OIL00046*DD	May 2008	001	Iron, Total (Fe)	1/Week	1	0	05/22/2008
OIL00046*DD	May 2008	001	Manganese, Total (Mn)	1/Week	1	0	05/22/2008
OIL00046*DD	July 2008	011	Total Suspended Solids	1/2Weeks	1	0	07/01/2008
OIL00046*DD	July 2008	011	pH	1/2Weeks	1	0	07/01/2008
OIL00046*DD	July 2008	011	Iron, Total (Fe)	1/2Weeks	1	0	07/01/2008
OIL00046*DD	July 2008	011	Manganese, Total (Mn)	1/2Weeks	1	0	07/01/2008
OIL00046*DD	July 2008	001	Total Suspended Solids	1/Week	1	0	07/22/2008
OIL00046*DD	July 2008	001	pH	1/Week	1	0	07/22/2008
OIL00046*DD	July 2008	001	Iron, Total (Fe)	1/Week	1	0	07/22/2008
OIL00046*DD	July 2008	001	Manganese, Total (Mn)	1/Week	1	0	07/22/2008
OIL00046*DD	August 2008	013	Mercury, Total	1/Quarter	1	0	08/01/2008
OIL00046*DD	August 2008	013	Copper, Total (Cu)	1/Quarter	1	0	08/01/2008
OIL00046*DD	August 2008	013	Lead, Total (Pb)	1/Quarter	1	0	08/01/2008
OIL00046*DD	August 2008	013	Cadmium, Total (Cd)	1/Quarter	1	0	08/01/2008
OIL00046*DD	August 2008	013	Residue, Total Dissolv	1/Quarter	1	0	08/01/2008
OIL00046*DD	August 2008	013	Sulfate, (SO4)	1/Quarter	1	0	08/01/2008
OIL00046*DD	August 2008	013	Arsenic, Total (As)	1/Quarter	1	0	08/01/2008
OIL00046*DD	August 2008	013	Selenium, Total (Se)	1/Quarter	1	0	08/01/2008
OIL00046*DD	August 2008	013	Zinc, Total	1/Quarter	1	0	08/01/2008
OIL00046*DD	August 2008	013	Chromium, Total	1/Quarter	1	0	08/01/2008
OIL00046*DD	November 2008	007	Total Suspended Solids	1/2Weeks	1	0	11/01/2008
OIL00046*DD	November 2008	007	pH	1/2Weeks	1	0	11/01/2008
OIL00046*DD	November 2008	007	Iron, Total (Fe)	1/2Weeks	1	0	11/01/2008
OIL00046*DD	November 2008	007	Manganese, Total (Mn)	1/2Weeks	1	0	11/01/2008
OIL00046*DD	December 2008	001	Manganese, Total (Mn)	1/Week	1	0	12/01/2008
OIL00046*DD	December 2008	001	Total Suspended Solids	1/Week	1	0	12/01/2008
OIL00046*DD	December 2008	001	pH	1/Week	1	0	12/01/2008
OIL00046*DD	December 2008	001	Iron, Total (Fe)	1/Week	1	0	12/01/2008
OIL00046*DD	December 2008	001	Manganese, Total (Mn)	1/Week	1	0	12/08/2008
OIL00046*DD	December 2008	001	Total Suspended Solids	1/Week	1	0	12/08/2008
OIL00046*DD	December 2008	001	pH	1/Week	1	0	12/08/2008
OIL00046*DD	December 2008	001	Iron, Total (Fe)	1/Week	1	0	12/08/2008
OIL00046*DD	December 2008	001	Manganese, Total (Mn)	1/Week	1	0	12/15/2008

	2008						
OIL00046*DD	December 2008	001	Total Suspended Solids	1/Week	1	0	12/15/2008
OIL00046*DD	December 2008	001	pH	1/Week	1	0	12/15/2008
OIL00046*DD	December 2008	001	Iron, Total (Fe)	1/Week	1	0	12/15/2008
OIL00046*DD	December 2008	001	Manganese, Total (Mn)	1/Week	1	0	12/22/2008
OIL00046*DD	December 2008	001	Total Suspended Solids	1/Week	1	0	12/22/2008
OIL00046*DD	December 2008	001	pH	1/Week	1	0	12/22/2008
OIL00046*DD	December 2008	001	Iron, Total (Fe)	1/Week	1	0	12/22/2008
OIL00046*DD	January 2009	011	Total Suspended Solids	1/2Weeks	1	0	01/15/2009
OIL00046*DD	January 2009	011	pH	1/2Weeks	1	0	01/15/2009
OIL00046*DD	January 2009	011	Iron, Total (Fe)	1/2Weeks	1	0	01/15/2009
OIL00046*DD	January 2009	011	Manganese, Total (Mn)	1/2Weeks	1	0	01/15/2009
OIL00046*DD	February 2009	011	Total Suspended Solids	1/2Weeks	1	0	02/15/2009
OIL00046*DD	February 2009	011	pH	1/2Weeks	1	0	02/15/2009
OIL00046*DD	February 2009	011	Iron, Total (Fe)	1/2Weeks	1	0	02/15/2009
OIL00046*DD	February 2009	011	Manganese, Total (Mn)	1/2Weeks	1	0	02/15/2009
OIL00046*DD	March 2009	001	Total Suspended Solids	1/Week	1	0	03/01/2009
OIL00046*DD	March 2009	001	pH	1/Week	1	0	03/01/2009
OIL00046*DD	March 2009	001	Iron, Total (Fe)	1/Week	1	0	03/01/2009
OIL00046*DD	March 2009	001	Manganese, Total (Mn)	1/Week	1	0	03/01/2009
OIL00046*DD	March 2009	001	Total Suspended Solids	1/Week	1	0	03/15/2009
OIL00046*DD	March 2009	001	pH	1/Week	1	0	03/15/2009
OIL00046*DD	March 2009	001	Iron, Total (Fe)	1/Week	1	0	03/15/2009
OIL00046*DD	March 2009	001	Manganese, Total (Mn)	1/Week	1	0	03/15/2009
OIL00046*DD	March 2009	001	Total Suspended Solids	1/Week	1	0	03/22/2009
OIL00046*DD	March 2009	001	pH	1/Week	1	0	03/22/2009
OIL00046*DD	March 2009	001	Iron, Total (Fe)	1/Week	1	0	03/22/2009
OIL00046*DD	March 2009	001	Manganese, Total (Mn)	1/Week	1	0	03/22/2009
OIL00046*DD	September 2009	002	Total Suspended Solids	2/Week	2	1	09/01/2009
OIL00046*DD	August 2010	013	Mercury, Total	1/Quarter	1	0	08/01/2010
OIL00046*DD	August 2010	013	Copper, Total (Cu)	1/Quarter	1	0	08/01/2010
OIL00046*DD	August 2010	013	Lead, Total (Pb)	1/Quarter	1	0	08/01/2010
OIL00046*DD	August 2010	013	Cadmium, Total (Cd)	1/Quarter	1	0	08/01/2010
OIL00046*DD	August 2010	013	Residue, Total Dissolv	1/Quarter	1	0	08/01/2010
OIL00046*DD	August 2010	013	Sulfate, (SO4)	1/Quarter	1	0	08/01/2010
OIL00046*DD	August 2010	013	Arsenic, Total (As)	1/Quarter	1	0	08/01/2010
OIL00046*DD	August 2010	013	Selenium, Total (Se)	1/Quarter	1	0	08/01/2010
OIL00046*DD	August 2010	013	Zinc, Total	1/Quarter	1	0	08/01/2010
OIL00046*DD	August 2010	013	Chromium, Total	1/Quarter	1	0	08/01/2010

OHIO VALLEY COAL CODE VIOLATIONS 1/1/2007 – 6/1/2012

Permit No	Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
OIL00046*DD	January 2007	001	Flow Rate			AB	1/1/2007
OIL00046*DD	January 2007	001	Flow Rate			AB	1/2/2007
OIL00046*DD	January 2007	011	Flow Rate			AB	1/2/2007
OIL00046*DD	January 2007	011	Flow Rate			AB	1/3/2007
OIL00046*DD	January 2007	007	Flow Rate			AB	1/4/2007
OIL00046*DD	January 2007	011	Flow Rate			AB	1/4/2007
OIL00046*DD	January 2007	011	Flow Rate			AB	1/5/2007
OIL00046*DD	January 2007	011	Flow Rate			AB	1/10/2007
OIL00046*DD	January 2007	007	Flow Rate			AB	1/11/2007
OIL00046*DD	January 2007	011	Flow Rate			AB	1/11/2007
OIL00046*DD	January 2007	007	Flow Rate			AB	1/12/2007
OIL00046*DD	January 2007	011	Flow Rate			AB	1/12/2007
OIL00046*DD	January 2007	011	Flow Rate			AB	1/15/2007
OIL00046*DD	January 2007	007	Total Suspended Solids			AB	1/16/2007
OIL00046*DD	January 2007	007	pH			AB	1/16/2007
OIL00046*DD	January 2007	007	Iron, Total (Fe)			AB	1/16/2007
OIL00046*DD	January 2007	007	Manganese, Total (Mn)			AB	1/16/2007
OIL00046*DD	January 2007	011	Flow Rate			AB	1/16/2007
OIL00046*DD	January 2007	007	Flow Rate			AB	1/17/2007
OIL00046*DD	January 2007	011	Flow Rate			AB	1/17/2007
OIL00046*DD	January 2007	007	Flow Rate			AB	1/18/2007
OIL00046*DD	January 2007	011	Flow Rate			AB	1/18/2007
OIL00046*DD	January 2007	007	Flow Rate			AB	1/19/2007
OIL00046*DD	January 2007	011	Flow Rate			AB	1/19/2007
OIL00046*DD	January 2007	007	Flow Rate			AB	1/22/2007
OIL00046*DD	January 2007	011	Flow Rate			AB	1/22/2007
OIL00046*DD	January 2007	007	Flow Rate			AB	1/23/2007
OIL00046*DD	January 2007	011	Flow Rate			AB	1/23/2007
OIL00046*DD	January 2007	007	Flow Rate			AB	1/24/2007
OIL00046*DD	January 2007	011	Flow Rate			AB	1/24/2007
OIL00046*DD	January 2007	007	Flow Rate			AB	1/25/2007
OIL00046*DD	January 2007	011	Flow Rate			AB	1/25/2007
OIL00046*DD	January 2007	007	Flow Rate			AB	1/26/2007
OIL00046*DD	January 2007	011	Flow Rate			AB	1/26/2007
OIL00046*DD	January 2007	007	Flow Rate			AB	1/29/2007
OIL00046*DD	January 2007	011	Flow Rate			AB	1/29/2007
OIL00046*DD	January 2007	007	Flow Rate			AB	1/30/2007
OIL00046*DD	January 2007	011	Flow Rate			AB	1/30/2007
OIL00046*DD	January 2007	007	Flow Rate			AB	1/31/2007

OIL00046*DD	January 2007	011	Flow Rate			AB	1/31/2007
OIL00046*DD	February 2007	007	Flow Rate			AB	2/1/2007
OIL00046*DD	February 2007	007	Flow Rate			AB	2/2/2007
OIL00046*DD	February 2007	007	Flow Rate			AB	2/5/2007
OIL00046*DD	February 2007	007	Flow Rate			AB	2/6/2007
OIL00046*DD	February 2007	007	Flow Rate			AB	2/7/2007
OIL00046*DD	February 2007	007	Flow Rate			AB	2/8/2007
OIL00046*DD	February 2007	007	Flow Rate			AB	2/9/2007
OIL00046*DD	February 2007	007	Flow Rate			AB	2/12/2007
OIL00046*DD	February 2007	007	Flow Rate			AB	2/13/2007
OIL00046*DD	February 2007	007	Flow Rate			AB	2/15/2007
OIL00046*DD	February 2007	007	Flow Rate			AB	2/16/2007
OIL00046*DD	February 2007	007	Flow Rate			AB	2/19/2007
OIL00046*DD	February 2007	007	Flow Rate			AB	2/20/2007
OIL00046*DD	February 2007	007	Flow Rate			AB	2/21/2007
OIL00046*DD	February 2007	007	Flow Rate			AB	2/23/2007
OIL00046*DD	February 2007	007	Flow Rate			AB	2/28/2007
OIL00046*DD	March 2007	007	Flow Rate			AB	3/1/2007
OIL00046*DD	March 2007	011	Flow Rate			AB	3/1/2007
OIL00046*DD	March 2007	007	Flow Rate			AB	3/5/2007
OIL00046*DD	March 2007	011	Flow Rate			AB	3/5/2007
OIL00046*DD	March 2007	007	Flow Rate			AB	3/6/2007
OIL00046*DD	March 2007	011	Flow Rate			AB	3/6/2007
OIL00046*DD	March 2007	007	Flow Rate			AB	3/7/2007
OIL00046*DD	March 2007	011	Flow Rate			AB	3/7/2007
OIL00046*DD	March 2007	007	Flow Rate			AB	3/8/2007
OIL00046*DD	March 2007	011	Flow Rate			AB	3/8/2007
OIL00046*DD	March 2007	007	Flow Rate			AB	3/9/2007
OIL00046*DD	March 2007	011	Flow Rate			AB	3/9/2007
OIL00046*DD	March 2007	007	Flow Rate			AB	3/12/2007
OIL00046*DD	March 2007	011	Flow Rate			AB	3/12/2007
OIL00046*DD	March 2007	007	Flow Rate			AB	3/13/2007
OIL00046*DD	March 2007	011	Flow Rate			AB	3/13/2007
OIL00046*DD	March 2007	007	Flow Rate			AB	3/14/2007
OIL00046*DD	March 2007	011	Flow Rate			AB	3/14/2007
OIL00046*DD	March 2007	007	Flow Rate			AB	3/19/2007
OIL00046*DD	March 2007	011	Flow Rate			AB	3/19/2007
OIL00046*DD	March 2007	007	Flow Rate			AB	3/26/2007
OIL00046*DD	March 2007	011	Flow Rate			AB	3/26/2007
OIL00046*DD	March 2007	007	Flow Rate			AB	3/27/2007
OIL00046*DD	March 2007	011	Flow Rate			AB	3/27/2007
OIL00046*DD	March 2007	007	Flow Rate			AB	3/28/2007
OIL00046*DD	March 2007	011	Flow Rate			AB	3/28/2007
OIL00046*DD	March 2007	007	Flow Rate			AB	3/29/2007

OIL00046*DD	March 2007	011	Flow Rate			AB	3/29/2007
OIL00046*DD	March 2007	007	Flow Rate			AB	3/30/2007
OIL00046*DD	March 2007	011	Flow Rate			AB	3/30/2007
OIL00046*DD	March 2007	001	Flow Rate			AB	3/31/2007
OIL00046*DD	April 2007	001	Flow Rate			AB	4/1/2007
OIL00046*DD	April 2007	001	Flow Rate			AB	4/2/2007
OIL00046*DD	April 2007	011	Flow Rate			AB	4/2/2007
OIL00046*DD	April 2007	011	Flow Rate			AB	4/3/2007
OIL00046*DD	April 2007	007	Flow Rate			AB	4/4/2007
OIL00046*DD	April 2007	011	Flow Rate			AB	4/4/2007
OIL00046*DD	April 2007	007	Flow Rate			AB	4/5/2007
OIL00046*DD	April 2007	011	Flow Rate			AB	4/5/2007
OIL00046*DD	April 2007	007	Flow Rate			AB	4/6/2007
OIL00046*DD	April 2007	011	Flow Rate			AB	4/6/2007
OIL00046*DD	April 2007	007	Flow Rate			AB	4/9/2007
OIL00046*DD	April 2007	011	Flow Rate			AB	4/9/2007
OIL00046*DD	April 2007	007	Flow Rate			AB	4/10/2007
OIL00046*DD	April 2007	011	Flow Rate			AB	4/10/2007
OIL00046*DD	April 2007	007	Flow Rate			AB	4/11/2007
OIL00046*DD	April 2007	011	Flow Rate			AB	4/11/2007
OIL00046*DD	April 2007	007	Flow Rate			AB	4/13/2007
OIL00046*DD	April 2007	011	Flow Rate			AB	4/13/2007
OIL00046*DD	April 2007	007	Flow Rate			AB	4/16/2007
OIL00046*DD	April 2007	011	Flow Rate			AB	4/16/2007
OIL00046*DD	April 2007	007	Flow Rate			AB	4/17/2007
OIL00046*DD	April 2007	011	Flow Rate			AB	4/17/2007
OIL00046*DD	April 2007	007	Flow Rate			AB	4/18/2007
OIL00046*DD	April 2007	011	Flow Rate			AB	4/18/2007
OIL00046*DD	April 2007	013	Flow Rate			AB	4/18/2007
OIL00046*DD	April 2007	007	Flow Rate			AB	4/19/2007
OIL00046*DD	April 2007	011	Flow Rate			AB	4/19/2007
OIL00046*DD	April 2007	007	Flow Rate			AB	4/20/2007
OIL00046*DD	April 2007	011	Flow Rate			AB	4/20/2007
OIL00046*DD	April 2007	007	Flow Rate			AB	4/23/2007
OIL00046*DD	April 2007	011	Flow Rate			AB	4/23/2007
OIL00046*DD	April 2007	007	Flow Rate			AB	4/24/2007
OIL00046*DD	April 2007	011	Flow Rate			AB	4/24/2007
OIL00046*DD	April 2007	007	Flow Rate			AB	4/25/2007
OIL00046*DD	April 2007	011	Flow Rate			AB	4/25/2007
OIL00046*DD	April 2007	007	Flow Rate			AB	4/26/2007
OIL00046*DD	April 2007	011	Flow Rate			AB	4/26/2007
OIL00046*DD	April 2007	007	Flow Rate			AB	4/27/2007
OIL00046*DD	April 2007	011	Flow Rate			AB	4/27/2007
OIL00046*DD	April 2007	007	Flow Rate			AB	4/30/2007

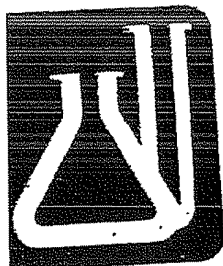
OIL00046*DD	April 2007	011	Flow Rate			AB	4/30/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/1/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/2/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/3/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/4/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/7/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/8/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/9/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/10/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/11/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/14/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/15/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/16/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/17/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/18/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/21/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/22/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/23/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/24/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/25/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/26/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/29/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/30/2007
OIL00046*DD	May 2007	007	Flow Rate			AB	5/31/2007
OIL00046*DD	June 2007	007	Flow Rate			AB	6/1/2007
OIL00046*DD	June 2007	007	Flow Rate			AB	6/4/2007
OIL00046*DD	June 2007	007	Flow Rate			AB	6/5/2007
OIL00046*DD	June 2007	007	Flow Rate			AB	6/6/2007
OIL00046*DD	June 2007	007	Flow Rate			AB	6/7/2007
OIL00046*DD	June 2007	007	Flow Rate			AB	6/8/2007
OIL00046*DD	June 2007	007	Flow Rate			AB	6/11/2007
OIL00046*DD	June 2007	007	Flow Rate			AB	6/12/2007
OIL00046*DD	June 2007	007	Flow Rate			AB	6/13/2007
OIL00046*DD	June 2007	007	Flow Rate			AB	6/15/2007
OIL00046*DD	June 2007	007	Flow Rate			AB	6/18/2007
OIL00046*DD	June 2007	007	Flow Rate			AB	6/19/2007
OIL00046*DD	June 2007	007	Flow Rate			AB	6/20/2007
OIL00046*DD	June 2007	007	Flow Rate			AB	6/21/2007
OIL00046*DD	June 2007	007	Flow Rate			AB	6/22/2007
OIL00046*DD	June 2007	007	Flow Rate			AB	6/25/2007
OIL00046*DD	June 2007	007	Flow Rate			AB	6/26/2007
OIL00046*DD	June 2007	007	Flow Rate			AB	6/27/2007
OIL00046*DD	June 2007	007	Flow Rate			AB	6/28/2007
OIL00046*DD	July 2007	007	Flow Rate			AB	7/2/2007

OIL00046*DD	July 2007	007	Flow Rate			AB	7/3/2007
OIL00046*DD	July 2007	007	Flow Rate			AB	7/4/2007
OIL00046*DD	July 2007	007	Flow Rate			AB	7/5/2007
OIL00046*DD	July 2007	007	Flow Rate			AB	7/9/2007
OIL00046*DD	July 2007	007	Flow Rate			AB	7/10/2007
OIL00046*DD	July 2007	007	Flow Rate			AB	7/11/2007
OIL00046*DD	July 2007	007	Flow Rate			AB	7/12/2007
OIL00046*DD	July 2007	007	Flow Rate			AB	7/13/2007
OIL00046*DD	July 2007	007	Flow Rate			AB	7/16/2007
OIL00046*DD	July 2007	007	Flow Rate			AB	7/17/2007
OIL00046*DD	July 2007	007	Flow Rate			AB	7/18/2007
OIL00046*DD	July 2007	007	Flow Rate			AB	7/20/2007
OIL00046*DD	July 2007	007	Flow Rate			AB	7/23/2007
OIL00046*DD	July 2007	007	Flow Rate			AB	7/24/2007
OIL00046*DD	July 2007	007	Flow Rate			AB	7/26/2007
OIL00046*DD	July 2007	001	Flow Rate			AB	7/27/2007
OIL00046*DD	July 2007	001	Flow Rate			AB	7/31/2007
OIL00046*DD	July 2007	007	Flow Rate			AB	7/31/2007
OIL00046*DD	August 2007	007	Flow Rate			AB	8/1/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/1/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/2/2007
OIL00046*DD	August 2007	007	Flow Rate			AB	8/2/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/2/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/3/2007
OIL00046*DD	August 2007	007	Flow Rate			AB	8/3/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/3/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/4/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/5/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/6/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/6/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/7/2007
OIL00046*DD	August 2007	007	Flow Rate			AB	8/7/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/7/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/8/2007
OIL00046*DD	August 2007	007	Flow Rate			AB	8/8/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/8/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/9/2007
OIL00046*DD	August 2007	007	Flow Rate			AB	8/9/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/9/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/10/2007
OIL00046*DD	August 2007	007	Flow Rate			AB	8/10/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/10/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/11/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/12/2007

OIL00046*DD	August 2007	001	Flow Rate			AB	8/13/2007
OIL00046*DD	August 2007	007	Flow Rate			AB	8/13/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/13/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/14/2007
OIL00046*DD	August 2007	007	Flow Rate			AB	8/14/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/14/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/15/2007
OIL00046*DD	August 2007	007	Flow Rate			AB	8/15/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/15/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/16/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/16/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/17/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/17/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/18/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/19/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/20/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/20/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/21/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/21/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/22/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/22/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/23/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/23/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/24/2007
OIL00046*DD	August 2007	007	Flow Rate			AB	8/24/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/24/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/25/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/26/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/27/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/27/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/28/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/28/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/29/2007
OIL00046*DD	August 2007	007	Flow Rate			AB	8/29/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/29/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/30/2007
OIL00046*DD	August 2007	007	Flow Rate			AB	8/30/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/30/2007
OIL00046*DD	August 2007	001	Flow Rate			AB	8/31/2007
OIL00046*DD	August 2007	007	Flow Rate			AB	8/31/2007
OIL00046*DD	August 2007	011	Flow Rate			AB	8/31/2007
OIL00046*DD	August 2007	013	Flow Rate			AB	8/31/2007
OIL00046*DD	September 2007	007	Flow Rate			AB	9/6/2007
OIL00046*DD	September 2007	007	Flow Rate			AB	9/7/2007

OIL00046*DD	September 2007	007	Flow Rate			AB	9/10/2007
OIL00046*DD	September 2007	007	Flow Rate			AB	9/12/2007
OIL00046*DD	September 2007	007	Flow Rate			AB	9/13/2007
OIL00046*DD	September 2007	007	Flow Rate			AB	9/14/2007
OIL00046*DD	September 2007	007	Flow Rate			AB	9/17/2007
OIL00046*DD	September 2007	007	Flow Rate			AB	9/18/2007
OIL00046*DD	September 2007	007	Flow Rate			AB	9/19/2007
OIL00046*DD	September 2007	007	Flow Rate			AB	9/20/2007
OIL00046*DD	September 2007	007	Flow Rate			AB	9/21/2007
OIL00046*DD	September 2007	007	Flow Rate			AB	9/24/2007
OIL00046*DD	September 2007	007	Flow Rate			AB	9/25/2007
OIL00046*DD	September 2007	007	Flow Rate			AB	9/26/2007
OIL00046*DD	September 2007	013	Flow Rate			AB	9/26/2007
OIL00046*DD	September 2007	007	Flow Rate			AB	9/27/2007
OIL00046*DD	January 2008	002	Flow Rate			AB	1/3/2008
OIL00046*DD	January 2008	002	Flow Rate			AB	1/21/2008

Attachment II



TRA-DET INC.

P. O. BOX 2019
WHEELING, WV 26003-0219
(304) 547-9094
FAX: (304) 547-9097

LABORATORY ANALYSES

SHIPPING ADDRESS
RD #2, BOX 227A
BATTLE RUN ROAD
TRIADAPLHIA, WV 26059-9609

17-Mar-08

Ohio Valley Coal Company
56854 Pleasant Ridge Road
Alliedonia, OH 43902
Attn: Mr. David Bartsch

By: 
TraDet, Inc.

Company: Ohio Valley Coal Company
Source: Captina
Analysis Number: 0802367

Sample Type: Special Quarterly
Sampled By: QES (ZC)
Date & Time Sampled: 02-28-08 1038
Date & Time Received: 02-28-08 1530

Field pH, S.U.	7.9	S.U.					
PARAMETER	CONCENTRATION		DATE & TIME ANALYZED	ANALYST	METHOD	MDL	
pH, Lab	7.82	S.U.	02-28-08 1720	WB	4500HB [2]		
Total Acidity (as CaCO ₃)	0.72	mg/L	03-03-08 1430	WB	2310B(4) [2]	0.16	mg/L
Total Alkalinity (as CaCO ₃)	98	mg/L	03-03-08 1100	WB	2320B [2]	0.13	mg/L
Total Iron	2.8	mg/L	03-05-08 1341	BS	3111B [1]	0.01	mg/L
Total Manganese	0.049	mg/L	03-05-08 1341	BS	3111B [1]	0.002	mg/L
Total Suspended Solids	160	mg/L	02-29-08 1600	WB	2540D [2]	0.87	mg/L
Hardness (as CaCO ₃)	140	mg/L	03-13-08 1230	MY	2340 C [1]	5.0	mg/L
Sulfate (as SO ₄)	66	mg/L	03-13-08 1220	LW	D516-02 [4]	0.65	mg/L
Specific Conductance	440	µmhos/cm	03-07-08 0830	LW	120.1 [3]	0.70	µmhos/cm
Nitrate	1.0	mg/L	02-28-08 1540	LW	352.1 [3]	0.03	mg/L

MDL: Method Detection Limit
[1] Standard Methods, 18th Edition [2] Standard Methods, 20th Edition [3] US EPA [4] ASTM [5] EPA SW846

Attachment III

AMERICAN ENERGY CORP. CENTURY MINE
Effluent Violations 9/2005 to 6/2012

Station	Parameter	Limit Type	Units	Limit	Reported Value	Violation Date
February 2006:						
601	CBOD 5 day	30D Qty	Kg/day	0.37	0.545	2/1/2006
601	CBOD 5 day	1D Qty	Kg/day	0.56	1.09	2/20/2006
April 2006:						
601	Nitrogen, Ammonia	30D Conc	mg/L	3.0	4.9	4/1/2006
601	Nitrogen, Ammonia	30D Qty	Kg/day	0.11	0.42	4/1/2006
601	Nitrogen, Ammonia	1D Qty	Kg/day	0.15	0.49	4/6/2006
601	Nitrogen, Ammonia	1D Conc	mg/L	4.0	5.6	4/6/2006
601	Nitrogen, Ammonia	1D Conc	mg/L	4.0	4.2	4/19/2006
601	Nitrogen, Ammonia	1D Qty	Kg/day	0.15	0.35	4/19/2006
May 2006:						
601	Nitrogen, Ammonia	30D Conc	mg/L	1.0	1.6	5/1/2006
601	Nitrogen, Ammonia	30D Qty	Kg/day	0.04	0.18	5/1/2006
601	Nitrogen, Ammonia	1D Qty	Kg/day	0.06	0.23	5/10/2006
601	Nitrogen, Ammonia	1D Conc	mg/L	1.5	1.68	5/10/2006
601	Nitrogen, Ammonia	1D Conc	mg/L	1.5	1.51	5/22/2006
601	Nitrogen, Ammonia	1D Qty	Kg/day	0.06	0.13	5/22/2006
June 2006:						
015	Total Suspended Solids	30D Conc	mg/L	35	4902	6/1/2006
601	Nitrogen, Ammonia	1D Qty	Kg/day	0.06	0.08	6/7/2006
015	Total Suspended Solids	1D Conc	mg/L	70	9800	6/21/2006
July 2006:						
017	CBOD 5 day	30D Qty	Kg/day	0.37	0.42	7/1/2006
017	CBOD 5 day	1D Qty	Kg/day	0.56	0.85	7/25/2006
September 2006:						
017	Nitrogen, Ammonia	30D Qty	Kg/day	0.04	0.05	9/1/2006
017	CBOD 5 day	30D Qty	Kg/day	0.37	0.53	9/1/2006
October 2006:						
017	Nitrogen, Ammonia	30D Qty	Kg/day	0.04	0.07	10/1/2006
017	CBOD 5 day	30D Qty	Kg/day	0.37	0.52	10/1/2006
016	Manganese, Total	30D Conc	ug/L	2000	2320	10/1/2006
017	Nitrogen, Ammonia	1D Qty	Kg/day	0.06	0.083	10/25/2006
016	Manganese, Total	1D Conc	ug/L	4000	4130	10/26/2006
November 2006:						
008	Manganese, Total	30D Conc	ug/L	2000	6600	11/1/2006
015	Manganese, Total	30D Conc	ug/L	2000	2045	11/1/2006
016	Manganese, Total	30D Conc	ug/L	2000	4805	11/1/2006
008	Manganese, Total	1D Conc	ug/L	4000	8140	11/8/2006
016	Manganese, Total	1D Conc	ug/L	4000	4980	11/14/2006
008	Manganese, Total	1D Conc	ug/L	4000	5060	11/15/2006
016	Manganese, Total	1D Conc	ug/L	4000	4630	11/15/2006
January 2007:						
002	Total Suspended Solids	30D Conc	mg/L	35	43	1/1/2007
017	Nitrogen, Ammonia	30D Conc	mg/L	3.0	11.2	1/1/2007
017	Nitrogen, Ammonia	30D Qty	Kg/day	0.11	0.24	1/1/2007
017	Nitrogen, Ammonia	1D Qty	Kg/day	0.15	0.25	1/10/2007

Station	Parameter	Limit Type	Units	Limit	Reported Value	Violation Date
017	Nitrogen, Ammonia	1D Conc	mg/L	4.0	13	1/10/2007
002	Nitrogen, Ammonia	1D Conc	mg/L	70	84	1/23/2007
017	Nitrogen, Ammonia	1D Qty	Kg/day	0.15	0.27	1/23/2007
017	Nitrogen, Ammonia	1D Conc	mg/L	4.0	12	1/23/2007
017	Nitrogen, Ammonia	1D Conc	mg/L	4.0	8.7	1/31/2007
017	Nitrogen, Ammonia	1D Qty	Kg/day	0.15	0.20	1/31/2007
February 2007:						
017	Nitrogen, Ammonia	30D Conc	mg/L	3.0	3.1	2/1/2007
017	Nitrogen, Ammonia	1D Conc	mg/L	4.0	5.0	2/9/2007
March 2007:						
008	Total Suspended Solids	30D Conc	mg/L	35	3007	3/1/2007
008	Total Suspended Solids	1D Conc	mg/L	70	6000	3/27/2007
April 2007:						
008	Total Suspended Solids	30D Conc	mg/L	35	325	4/1/2007
015	Manganese, Total	30D Conc	ug/L	2000	2300	4/1/2007
008	Total Suspended Solids	1D Conc	mg/L	70	6500	4/9/2007
May 2007:						
017	Fecal Coliform	30D Conc	#/100 ml	1000	1700	5/1/2007
October 2007:						
017	Dissolved Oxygen	1D Conc	mg/L	6	4	10/29/2007
November 2007:						
017	CBOD 5 day	30D Conc	mg/L	10	10.3	11/1/2007
017	Nitrogen, Ammonia	30D Conc	mg/L	3.0	3.58	11/1/2007
017	CBOD 5 day	1D Conc	mg/L	15	29.	11/21/2007
017	Nitrogen, Ammonia	1D Conc	mg/L	4.0	10	11/21/2007
February 2008:						
015	Manganese, Total	30D Conc	ug/L	2000	2050	2/1/2008
May 2008:						
017	Nitrogen, Ammonia	30D Conc	mg/L	1.0	1.48	5/1/2008
017	Nitrogen, Ammonia	1D Conc	mg/L	1.5	2.7	5/21/2008
017	Nitrogen, Ammonia	1D Qty	Kg/day	0.06	0.072	5/21/2008
June 2008:						
017	Nitrogen, Ammonia	30D Conc	mg/L	1.0	1.61	6/1/2008
017	Fecal Coliform	30D Conc	mg/L	1000	20000	6/1/2008
017	Nitrogen, Ammonia	1D Conc	mg/L	1.5	2.9	6/4/2008
017	Nitrogen, Ammonia	1D Qty	Kg/day	0.06	0.066	6/4/2008
017	Fecal Coliform	1D Conc	#/100 ml	2000	20000	6/11/2008
July 2008:						
017	Fecal Coliform	30D Conc	#/100 ml	1000	22000	7/1/2008
017	Fecal Coliform	1D Conc	#/100 ml	2000	22000	7/9/2008
December 2008:						
008	Manganese, Total	30D Conc	ug/L	2000	2150	12/1/2008
January 2009:						
017	Dissolved Oxygen	1D Conc	mg/L	6	4	1/21/2009
February 2009:						
015	Manganese, Total	30D Conc	ug/L	2000	2350	2/1/2009
June 2009:						
017	Fecal Coliform	30D Conc	#/100 ml	1000	2200	6/1/2009
017	Fecal Coliform	1D Conc	#/100 ml	2000	2200	6/11/2009

Station	Parameter	Limit Type	Units	Limit	Reported Value	Violation Date
February 2010:						
015	Manganese, Total	30D Conc	ug/L	2000	2002	2/1/2010
May 2010:						
017	Nitrogen, Ammonia	30D Conc	mg/L	1.0	2.0	5/1/2010
017	Nitrogen, Ammonia	1D Conc	mg/L	1.5	2.6	5/19/2010
June 2010:						
017	Nitrogen, Ammonia	30D Conc	mg/L	1.0	4.9	6/1/2010
017	Fecal Coliform	30D Conc	#/100 ml	1000	6600	6/1/2010
017	Nitrogen, Ammonia	1D Conc	mg/L	1.5	9	6/2/2010
017	Fecal Coliform	1D Conc	#/100 ml	2000	6600	6/28/2010
October 2010:						
015	pH	1D Conc	S.U.	9.0	9.11	10/3/2010
March 2011:						
015	Iron, Total	30D Conc	ug/L	4000	8673	3/1/2011
015	Manganese, Total	30D Conc	ug/L	2000	2323	3/1/2011
015	Total Suspended Solids	30D Conc	mg/L	35	36.5	3/1/2011
015	Iron, Total	1D Conc	ug/L	6000	33010	3/14/2011
015	Total Suspended Solids	1D Conc	mg/L	70	75	3/14/2011
015	Manganese, Total	1D Conc	ug/L	4000	7241	3/14/2011
April 2011:						
014	Total Suspended Solids	30D Conc	mg/L	35	57	4/1/2011

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AMERICAN ENERGY CORP FREQUENCY VIOLATIONS 1/1/2007 – 6/1/2012

Permit No	Reporting Period	Station	Parameter	Sample Frequency	Expected	Reported	Violation Date
OIL00091*GD	January 2007	008	Residue, Total Dissolv	1/2Weeks	1	0	01/01/2007
OIL00091*GD	January 2007	017	Water Temperature	1/Week	1	0	01/01/2007
OIL00091*GD	January 2007	017	Odor, Severity	1/Day	1	0	01/01/2007
OIL00091*GD	January 2007	017	Turbidity, Severity	1/Day	1	0	01/01/2007
OIL00091*GD	January 2007	017	Odor, Severity	1/Day	1	0	01/02/2007
OIL00091*GD	January 2007	017	Turbidity, Severity	1/Day	1	0	01/02/2007
OIL00091*GD	January 2007	017	Color, Severity	1/Day	1	0	01/03/2007
OIL00091*GD	January 2007	017	Odor, Severity	1/Day	1	0	01/03/2007
OIL00091*GD	January 2007	017	Turbidity, Severity	1/Day	1	0	01/03/2007
OIL00091*GD	January 2007	017	Color, Severity	1/Day	1	0	01/04/2007
OIL00091*GD	January 2007	017	Odor, Severity	1/Day	1	0	01/04/2007
OIL00091*GD	January 2007	017	Turbidity, Severity	1/Day	1	0	01/04/2007
OIL00091*GD	January 2007	017	Color, Severity	1/Day	1	0	01/05/2007
OIL00091*GD	January 2007	017	Odor, Severity	1/Day	1	0	01/05/2007
OIL00091*GD	January 2007	017	Turbidity, Severity	1/Day	1	0	01/05/2007
OIL00091*GD	January 2007	017	Color, Severity	1/Day	1	0	01/06/2007
OIL00091*GD	January 2007	017	Odor, Severity	1/Day	1	0	01/06/2007
OIL00091*GD	January 2007	017	Turbidity, Severity	1/Day	1	0	01/06/2007
OIL00091*GD	January 2007	017	Color, Severity	1/Day	1	0	01/07/2007
OIL00091*GD	January 2007	017	Odor, Severity	1/Day	1	0	01/07/2007
OIL00091*GD	January 2007	017	Turbidity, Severity	1/Day	1	0	01/07/2007
OIL00091*GD	January 2007	017	Color, Severity	1/Day	1	0	01/08/2007
OIL00091*GD	January 2007	017	Odor, Severity	1/Day	1	0	01/08/2007
OIL00091*GD	January 2007	017	Turbidity, Severity	1/Day	1	0	01/08/2007
OIL00091*GD	January 2007	017	Color, Severity	1/Day	1	0	01/09/2007
OIL00091*GD	January 2007	017	Odor, Severity	1/Day	1	0	01/09/2007
OIL00091*GD	January 2007	017	Turbidity, Severity	1/Day	1	0	01/09/2007
OIL00091*GD	January 2007	017	Color, Severity	1/Day	1	0	01/10/2007
OIL00091*GD	January 2007	017	Odor, Severity	1/Day	1	0	01/10/2007
OIL00091*GD	January 2007	017	Turbidity, Severity	1/Day	1	0	01/10/2007
OIL00091*GD	January 2007	017	Color, Severity	1/Day	1	0	01/11/2007
OIL00091*GD	January 2007	017	Odor, Severity	1/Day	1	0	01/11/2007
OIL00091*GD	January 2007	017	Turbidity, Severity	1/Day	1	0	01/11/2007
OIL00091*GD	January 2007	017	Color, Severity	1/Day	1	0	01/12/2007
OIL00091*GD	January 2007	017	Odor, Severity	1/Day	1	0	01/12/2007
OIL00091*GD	January 2007	017	Turbidity, Severity	1/Day	1	0	01/12/2007
OIL00091*GD	January 2007	017	Color, Severity	1/Day	1	0	01/13/2007
OIL00091*GD	January 2007	017	Odor, Severity	1/Day	1	0	01/13/2007
OIL00091*GD	January 2007	017	Turbidity, Severity	1/Day	1	0	01/13/2007
OIL00091*GD	January 2007	017	Color, Severity	1/Day	1	0	01/14/2007
OIL00091*GD	January 2007	017	Odor, Severity	1/Day	1	0	01/14/2007
OIL00091*GD	January 2007	017	Turbidity, Severity	1/Day	1	0	01/14/2007
OIL00091*GD	January 2007	008	Residue, Total Dissolv	1/2Weeks	1	0	01/15/2007
OIL00091*GD	January 2007	008	Conductivity	1/2Weeks	1	0	01/15/2007
OIL00091*GD	January 2007	017	Color, Severity	1/Day	1	0	01/15/2007
OIL00091*GD	January 2007	017	Odor, Severity	1/Day	1	0	01/15/2007
OIL00091*GD	January 2007	017	Turbidity, Severity	1/Day	1	0	01/15/2007
OIL00091*GD	January 2007	017	Color, Severity	1/Day	1	0	01/16/2007

[illegible]

[illegible]

[illegible]

5

[illegible]

[illegible]

[illegible]

OIL00091*GD	June	2007	017	Turbidity, Severity	1/Day	1	0	06/10/2007
OIL00091*GD	June	2007	017	Color, Severity	1/Day	1	0	06/11/2007
OIL00091*GD	June	2007	017	Turbidity, Severity	1/Day	1	0	06/11/2007
OIL00091*GD	June	2007	017	Color, Severity	1/Day	1	0	06/12/2007
OIL00091*GD	June	2007	017	Odor, Severity	1/Day	1	0	06/12/2007
OIL00091*GD	June	2007	017	Turbidity, Severity	1/Day	1	0	06/12/2007
OIL00091*GD	June	2007	017	Color, Severity	1/Day	1	0	06/13/2007
OIL00091*GD	June	2007	017	Odor, Severity	1/Day	1	0	06/13/2007
OIL00091*GD	June	2007	017	Turbidity, Severity	1/Day	1	0	06/13/2007
OIL00091*GD	June	2007	017	Color, Severity	1/Day	1	0	06/14/2007
OIL00091*GD	June	2007	017	Odor, Severity	1/Day	1	0	06/14/2007
OIL00091*GD	June	2007	017	Turbidity, Severity	1/Day	1	0	06/14/2007
OIL00091*GD	June	2007	017	Color, Severity	1/Day	1	0	06/15/2007
OIL00091*GD	June	2007	017	Total Suspended Solids	1/2Weeks	1	0	06/15/2007
OIL00091*GD	June	2007	017	Nitrogen, Ammonia (NH3)	1/2Weeks	1	0	06/15/2007
OIL00091*GD	June	2007	017	Odor, Severity	1/Day	1	0	06/15/2007
OIL00091*GD	June	2007	017	Turbidity, Severity	1/Day	1	0	06/15/2007
OIL00091*GD	June	2007	017	CBOD 5 day	1/2Weeks	1	0	06/15/2007
OIL00091*GD	June	2007	017	Chlorine, Total Residu	1/2Weeks	1	0	06/15/2007
OIL00091*GD	June	2007	017	Color, Severity	1/Day	1	0	06/16/2007
OIL00091*GD	June	2007	017	Odor, Severity	1/Day	1	0	06/16/2007
OIL00091*GD	June	2007	017	Turbidity, Severity	1/Day	1	0	06/16/2007
OIL00091*GD	June	2007	017	Color, Severity	1/Day	1	0	06/17/2007
OIL00091*GD	June	2007	017	Odor, Severity	1/Day	1	0	06/17/2007
OIL00091*GD	June	2007	017	Turbidity, Severity	1/Day	1	0	06/17/2007
OIL00091*GD	June	2007	017	Color, Severity	1/Day	1	0	06/18/2007
OIL00091*GD	June	2007	017	Odor, Severity	1/Day	1	0	06/18/2007
OIL00091*GD	June	2007	017	Turbidity, Severity	1/Day	1	0	06/18/2007
OIL00091*GD	June	2007	017	Color, Severity	1/Day	1	0	06/19/2007
OIL00091*GD	June	2007	017	Odor, Severity	1/Day	1	0	06/19/2007
OIL00091*GD	June	2007	017	Turbidity, Severity	1/Day	1	0	06/19/2007
OIL00091*GD	June	2007	017	Color, Severity	1/Day	1	0	06/20/2007
OIL00091*GD	June	2007	017	Odor, Severity	1/Day	1	0	06/20/2007
OIL00091*GD	June	2007	017	Turbidity, Severity	1/Day	1	0	06/20/2007
OIL00091*GD	June	2007	017	Color, Severity	1/Day	1	0	06/21/2007
OIL00091*GD	June	2007	017	Odor, Severity	1/Day	1	0	06/21/2007
OIL00091*GD	June	2007	017	Turbidity, Severity	1/Day	1	0	06/21/2007
OIL00091*GD	June	2007	017	Color, Severity	1/Day	1	0	06/22/2007
OIL00091*GD	June	2007	017	Odor, Severity	1/Day	1	0	06/22/2007
OIL00091*GD	June	2007	017	Turbidity, Severity	1/Day	1	0	06/22/2007
OIL00091*GD	June	2007	017	Color, Severity	1/Day	1	0	06/23/2007
OIL00091*GD	June	2007	017	Odor, Severity	1/Day	1	0	06/23/2007
OIL00091*GD	June	2007	017	Turbidity, Severity	1/Day	1	0	06/23/2007
OIL00091*GD	June	2007	017	Color, Severity	1/Day	1	0	06/24/2007
OIL00091*GD	June	2007	017	Odor, Severity	1/Day	1	0	06/24/2007
OIL00091*GD	June	2007	017	Turbidity, Severity	1/Day	1	0	06/24/2007
OIL00091*GD	June	2007	017	Color, Severity	1/Day	1	0	06/25/2007
OIL00091*GD	June	2007	017	Odor, Severity	1/Day	1	0	06/25/2007
OIL00091*GD	June	2007	017	Turbidity, Severity	1/Day	1	0	06/25/2007
OIL00091*GD	June	2007	017	Color, Severity	1/Day	1	0	06/26/2007
OIL00091*GD	June	2007	017	Odor, Severity	1/Day	1	0	06/26/2007

Figure 1. The effect of the number of trials on the number of correct responses. The number of correct responses was plotted against the number of trials for each condition. The number of correct responses increased with the number of trials for all conditions. The number of correct responses was highest for the condition with the highest number of trials (10 trials) and lowest for the condition with the lowest number of trials (2 trials).

OIL00091*GD	July	2007	017	Color, Severity	1/Day	1	0	07/17/2007
OIL00091*GD	July	2007	017	Odor, Severity	1/Day	1	0	07/17/2007
OIL00091*GD	July	2007	017	Turbidity, Severity	1/Day	1	0	07/17/2007
OIL00091*GD	July	2007	017	Color, Severity	1/Day	1	0	07/19/2007
OIL00091*GD	July	2007	017	Odor, Severity	1/Day	1	0	07/19/2007
OIL00091*GD	July	2007	017	Color, Severity	1/Day	1	0	07/20/2007
OIL00091*GD	July	2007	017	Odor, Severity	1/Day	1	0	07/20/2007
OIL00091*GD	July	2007	017	Turbidity, Severity	1/Day	1	0	07/20/2007
OIL00091*GD	July	2007	017	Color, Severity	1/Day	1	0	07/21/2007
OIL00091*GD	July	2007	017	Odor, Severity	1/Day	1	0	07/21/2007
OIL00091*GD	July	2007	017	Turbidity, Severity	1/Day	1	0	07/21/2007
OIL00091*GD	July	2007	017	Color, Severity	1/Day	1	0	07/22/2007
OIL00091*GD	July	2007	017	Odor, Severity	1/Day	1	0	07/22/2007
OIL00091*GD	July	2007	017	Turbidity, Severity	1/Day	1	0	07/22/2007
OIL00091*GD	July	2007	017	Odor, Severity	1/Day	1	0	07/23/2007
OIL00091*GD	July	2007	017	Turbidity, Severity	1/Day	1	0	07/23/2007
OIL00091*GD	July	2007	017	Color, Severity	1/Day	1	0	07/24/2007
OIL00091*GD	July	2007	017	Odor, Severity	1/Day	1	0	07/24/2007
OIL00091*GD	July	2007	017	Turbidity, Severity	1/Day	1	0	07/24/2007
OIL00091*GD	July	2007	017	Color, Severity	1/Day	1	0	07/25/2007
OIL00091*GD	July	2007	017	Odor, Severity	1/Day	1	0	07/25/2007
OIL00091*GD	July	2007	017	Turbidity, Severity	1/Day	1	0	07/25/2007
OIL00091*GD	July	2007	017	Color, Severity	1/Day	1	0	07/26/2007
OIL00091*GD	July	2007	017	Turbidity, Severity	1/Day	1	0	07/26/2007
OIL00091*GD	July	2007	017	Color, Severity	1/Day	1	0	07/27/2007
OIL00091*GD	July	2007	017	Odor, Severity	1/Day	1	0	07/27/2007
OIL00091*GD	July	2007	017	Turbidity, Severity	1/Day	1	0	07/27/2007
OIL00091*GD	July	2007	017	Color, Severity	1/Day	1	0	07/28/2007
OIL00091*GD	July	2007	017	Odor, Severity	1/Day	1	0	07/28/2007
OIL00091*GD	July	2007	017	Turbidity, Severity	1/Day	1	0	07/28/2007
OIL00091*GD	July	2007	017	Color, Severity	1/Day	1	0	07/29/2007
OIL00091*GD	July	2007	017	Odor, Severity	1/Day	1	0	07/29/2007
OIL00091*GD	July	2007	017	Turbidity, Severity	1/Day	1	0	07/29/2007
OIL00091*GD	July	2007	017	Color, Severity	1/Day	1	0	07/30/2007
OIL00091*GD	July	2007	017	Odor, Severity	1/Day	1	0	07/30/2007
OIL00091*GD	July	2007	017	Turbidity, Severity	1/Day	1	0	07/30/2007
OIL00091*GD	July	2007	017	Color, Severity	1/Day	1	0	07/31/2007
OIL00091*GD	July	2007	017	Odor, Severity	1/Day	1	0	07/31/2007
OIL00091*GD	July	2007	017	Turbidity, Severity	1/Day	1	0	07/31/2007
OIL00091*GD	August	2007	017	Chlorine, Total Residu	1/2Weeks	1	0	08/01/2007
OIL00091*GD	August	2007	017	Color, Severity	1/Day	1	0	08/04/2007
OIL00091*GD	August	2007	017	Odor, Severity	1/Day	1	0	08/04/2007
OIL00091*GD	August	2007	017	Turbidity, Severity	1/Day	1	0	08/04/2007
OIL00091*GD	August	2007	017	Odor, Severity	1/Day	1	0	08/05/2007
OIL00091*GD	August	2007	017	Color, Severity	1/Day	1	0	08/11/2007
OIL00091*GD	August	2007	017	Odor, Severity	1/Day	1	0	08/11/2007
OIL00091*GD	August	2007	017	Turbidity, Severity	1/Day	1	0	08/11/2007
OIL00091*GD	August	2007	017	Color, Severity	1/Day	1	0	08/12/2007
OIL00091*GD	August	2007	017	Odor, Severity	1/Day	1	0	08/12/2007
OIL00091*GD	August	2007	017	Turbidity, Severity	1/Day	1	0	08/12/2007
OIL00091*GD	August	2007	017	Chlorine, Total Residu	1/2Weeks	1	0	08/15/2007
OIL00091*GD	August	2007	017	Color, Severity	1/Day	1	0	08/18/2007

OIL00091*GD	August 2007	017	Odor, Severity	1/Day	1	0	08/18/2007
OIL00091*GD	August 2007	017	Turbidity, Severity	1/Day	1	0	08/18/2007
OIL00091*GD	August 2007	017	Color, Severity	1/Day	1	0	08/19/2007
OIL00091*GD	August 2007	017	Odor, Severity	1/Day	1	0	08/19/2007
OIL00091*GD	August 2007	017	Turbidity, Severity	1/Day	1	0	08/19/2007
OIL00091*GD	August 2007	017	Odor, Severity	1/Day	1	0	08/25/2007
OIL00091*GD	August 2007	017	Turbidity, Severity	1/Day	1	0	08/25/2007
OIL00091*GD	August 2007	017	Color, Severity	1/Day	1	0	08/26/2007
OIL00091*GD	August 2007	017	Turbidity, Severity	1/Day	1	0	08/26/2007
OIL00091*GD	September 2007	017	Color, Severity	1/Day	1	0	09/01/2007
OIL00091*GD	September 2007	017	Turbidity, Severity	1/Day	1	0	09/01/2007
OIL00091*GD	September 2007	017	Color, Severity	1/Day	1	0	09/02/2007
OIL00091*GD	September 2007	017	Odor, Severity	1/Day	1	0	09/02/2007
OIL00091*GD	September 2007	017	Turbidity, Severity	1/Day	1	0	09/02/2007
OIL00091*GD	September 2007	017	Color, Severity	1/Day	1	0	09/03/2007
OIL00091*GD	September 2007	017	Odor, Severity	1/Day	1	0	09/03/2007
OIL00091*GD	September 2007	017	Turbidity, Severity	1/Day	1	0	09/03/2007
OIL00091*GD	September 2007	017	Color, Severity	1/Day	1	0	09/08/2007
OIL00091*GD	September 2007	017	Odor, Severity	1/Day	1	0	09/08/2007
OIL00091*GD	September 2007	017	Turbidity, Severity	1/Day	1	0	09/08/2007
OIL00091*GD	September 2007	017	Color, Severity	1/Day	1	0	09/09/2007
OIL00091*GD	September 2007	017	Odor, Severity	1/Day	1	0	09/09/2007
OIL00091*GD	September 2007	017	Turbidity, Severity	1/Day	1	0	09/09/2007
OIL00091*GD	September 2007	017	Color, Severity	1/Day	1	0	09/15/2007
OIL00091*GD	September 2007	017	Turbidity, Severity	1/Day	1	0	09/15/2007
OIL00091*GD	September 2007	017	Color, Severity	1/Day	1	0	09/16/2007
OIL00091*GD	September 2007	017	Odor, Severity	1/Day	1	0	09/16/2007
OIL00091*GD	September 2007	017	Turbidity, Severity	1/Day	1	0	09/16/2007
OIL00091*GD	September 2007	017	Color, Severity	1/Day	1	0	09/22/2007
OIL00091*GD	September 2007	017	Turbidity, Severity	1/Day	1	0	09/22/2007
OIL00091*GD	September 2007	017	Color, Severity	1/Day	1	0	09/23/2007
OIL00091*GD	September 2007	017	Odor, Severity	1/Day	1	0	09/23/2007
OIL00091*GD	September 2007	017	Turbidity, Severity	1/Day	1	0	09/23/2007

OIL00091*GD	September 2007	017	Color, Severity	1/Day	1	0	09/29/2007
OIL00091*GD	September 2007	017	Odor, Severity	1/Day	1	0	09/29/2007
OIL00091*GD	September 2007	017	Turbidity, Severity	1/Day	1	0	09/29/2007
OIL00091*GD	September 2007	017	Color, Severity	1/Day	1	0	09/30/2007
OIL00091*GD	September 2007	017	Odor, Severity	1/Day	1	0	09/30/2007
OIL00091*GD	September 2007	017	Turbidity, Severity	1/Day	1	0	09/30/2007
OIL00091*GD	October 2007	017	Color, Severity	1/Day	1	0	10/06/2007
OIL00091*GD	October 2007	017	Odor, Severity	1/Day	1	0	10/06/2007
OIL00091*GD	October 2007	017	Turbidity, Severity	1/Day	1	0	10/06/2007
OIL00091*GD	October 2007	017	Color, Severity	1/Day	1	0	10/07/2007
OIL00091*GD	October 2007	017	Odor, Severity	1/Day	1	0	10/07/2007
OIL00091*GD	October 2007	017	Turbidity, Severity	1/Day	1	0	10/07/2007
OIL00091*GD	October 2007	017	Color, Severity	1/Day	1	0	10/13/2007
OIL00091*GD	October 2007	017	Odor, Severity	1/Day	1	0	10/13/2007
OIL00091*GD	October 2007	017	Turbidity, Severity	1/Day	1	0	10/13/2007
OIL00091*GD	October 2007	017	Color, Severity	1/Day	1	0	10/14/2007
OIL00091*GD	October 2007	017	Odor, Severity	1/Day	1	0	10/14/2007
OIL00091*GD	October 2007	017	Turbidity, Severity	1/Day	1	0	10/14/2007
OIL00091*GD	October 2007	017	Total Suspended Solids	1/2Weeks	1	0	10/15/2007
OIL00091*GD	October 2007	017	Nitrogen, Ammonia (NH3)	1/2Weeks	1	0	10/15/2007
OIL00091*GD	October 2007	017	CBOD 5 day	1/2Weeks	1	0	10/15/2007
OIL00091*GD	October 2007	017	pH	1/2Weeks	1	0	10/15/2007
OIL00091*GD	October 2007	017	Dissolved Oxygen	1/2Weeks	1	0	10/15/2007
OIL00091*GD	October 2007	017	Color, Severity	1/Day	1	0	10/20/2007
OIL00091*GD	October 2007	017	Odor, Severity	1/Day	1	0	10/20/2007
OIL00091*GD	October 2007	017	Turbidity, Severity	1/Day	1	0	10/20/2007
OIL00091*GD	October 2007	017	Color, Severity	1/Day	1	0	10/21/2007
OIL00091*GD	October 2007	017	Odor, Severity	1/Day	1	0	10/21/2007
OIL00091*GD	October 2007	017	Turbidity, Severity	1/Day	1	0	10/21/2007
OIL00091*GD	October 2007	017	Color, Severity	1/Day	1	0	10/27/2007
OIL00091*GD	October 2007	017	Odor, Severity	1/Day	1	0	10/27/2007
OIL00091*GD	October 2007	017	Turbidity, Severity	1/Day	1	0	10/27/2007
OIL00091*GD	October 2007	017	Color, Severity	1/Day	1	0	10/28/2007
OIL00091*GD	October 2007	017	Odor, Severity	1/Day	1	0	10/28/2007
OIL00091*GD	October 2007	017	Turbidity, Severity	1/Day	1	0	10/28/2007
OIL00091*GD	November 2007	017	Color, Severity	1/Day	1	0	11/03/2007
OIL00091*GD	November 2007	017	Odor, Severity	1/Day	1	0	11/03/2007
OIL00091*GD	November 2007	017	Color, Severity	1/Day	1	0	11/04/2007
OIL00091*GD	November 2007	017	Odor, Severity	1/Day	1	0	11/04/2007
OIL00091*GD	November 2007	017	Turbidity, Severity	1/Day	1	0	11/04/2007
OIL00091*GD	November 2007	017	Color, Severity	1/Day	1	0	11/10/2007
OIL00091*GD	November 2007	017	Odor, Severity	1/Day	1	0	11/10/2007

	2007						
OIL00091*GD	November 2007	017	Turbidity, Severity	1/Day	1	0	11/10/2007
OIL00091*GD	November 2007	017	Color, Severity	1/Day	1	0	11/11/2007
OIL00091*GD	November 2007	017	Odor, Severity	1/Day	1	0	11/11/2007
OIL00091*GD	November 2007	017	Turbidity, Severity	1/Day	1	0	11/11/2007
OIL00091*GD	November 2007	017	Color, Severity	1/Day	1	0	11/17/2007
OIL00091*GD	November 2007	017	Odor, Severity	1/Day	1	0	11/17/2007
OIL00091*GD	November 2007	017	Color, Severity	1/Day	1	0	11/18/2007
OIL00091*GD	November 2007	017	Odor, Severity	1/Day	1	0	11/18/2007
OIL00091*GD	November 2007	017	Turbidity, Severity	1/Day	1	0	11/18/2007
OIL00091*GD	November 2007	017	Color, Severity	1/Day	1	0	11/22/2007
OIL00091*GD	November 2007	017	Odor, Severity	1/Day	1	0	11/22/2007
OIL00091*GD	November 2007	017	Turbidity, Severity	1/Day	1	0	11/22/2007
OIL00091*GD	November 2007	017	Color, Severity	1/Day	1	0	11/24/2007
OIL00091*GD	November 2007	017	Odor, Severity	1/Day	1	0	11/24/2007
OIL00091*GD	November 2007	017	Turbidity, Severity	1/Day	1	0	11/24/2007
OIL00091*GD	November 2007	017	Color, Severity	1/Day	1	0	11/25/2007
OIL00091*GD	November 2007	017	Turbidity, Severity	1/Day	1	0	11/25/2007
OIL00091*GD	December 2007	017	Color, Severity	1/Day	1	0	12/01/2007
OIL00091*GD	December 2007	017	Odor, Severity	1/Day	1	0	12/01/2007
OIL00091*GD	December 2007	017	Turbidity, Severity	1/Day	1	0	12/01/2007
OIL00091*GD	December 2007	017	Color, Severity	1/Day	1	0	12/02/2007
OIL00091*GD	December 2007	017	Odor, Severity	1/Day	1	0	12/02/2007
OIL00091*GD	December 2007	017	Color, Severity	1/Day	1	0	12/08/2007
OIL00091*GD	December 2007	017	Odor, Severity	1/Day	1	0	12/08/2007
OIL00091*GD	December 2007	017	Turbidity, Severity	1/Day	1	0	12/08/2007
OIL00091*GD	December 2007	017	Color, Severity	1/Day	1	0	12/09/2007
OIL00091*GD	December 2007	017	Odor, Severity	1/Day	1	0	12/09/2007
OIL00091*GD	December 2007	017	Turbidity, Severity	1/Day	1	0	12/09/2007
OIL00091*GD	December 2007	017	Color, Severity	1/Day	1	0	12/15/2007

	2007						
OIL00091*GD	December 2007	017	Odor, Severity	1/Day	1	0	12/15/2007
OIL00091*GD	December 2007	017	Turbidity, Severity	1/Day	1	0	12/15/2007
OIL00091*GD	December 2007	015	Conductivity	1/2Weeks	1	0	12/15/2007
OIL00091*GD	December 2007	017	Color, Severity	1/Day	1	0	12/16/2007
OIL00091*GD	December 2007	017	Odor, Severity	1/Day	1	0	12/16/2007
OIL00091*GD	December 2007	017	Turbidity, Severity	1/Day	1	0	12/16/2007
OIL00091*GD	December 2007	017	Color, Severity	1/Day	1	0	12/22/2007
OIL00091*GD	December 2007	017	Odor, Severity	1/Day	1	0	12/22/2007
OIL00091*GD	December 2007	017	Turbidity, Severity	1/Day	1	0	12/22/2007
OIL00091*GD	December 2007	017	Color, Severity	1/Day	1	0	12/23/2007
OIL00091*GD	December 2007	017	Odor, Severity	1/Day	1	0	12/23/2007
OIL00091*GD	December 2007	017	Turbidity, Severity	1/Day	1	0	12/23/2007
OIL00091*GD	December 2007	017	Color, Severity	1/Day	1	0	12/25/2007
OIL00091*GD	December 2007	017	Turbidity, Severity	1/Day	1	0	12/25/2007
OIL00091*GD	December 2007	017	Color, Severity	1/Day	1	0	12/29/2007
OIL00091*GD	December 2007	017	Odor, Severity	1/Day	1	0	12/29/2007
OIL00091*GD	December 2007	017	Turbidity, Severity	1/Day	1	0	12/29/2007
OIL00091*GD	December 2007	017	Color, Severity	1/Day	1	0	12/30/2007
OIL00091*GD	December 2007	017	Odor, Severity	1/Day	1	0	12/30/2007
OIL00091*GD	December 2007	017	Turbidity, Severity	1/Day	1	0	12/30/2007
OIL00091*GD	July 2008	017	Water Temperature	1/Week	1	0	07/22/2008
OIL00091*GD	October 2008	015	Total Suspended Solids	1/2Weeks	1	0	10/15/2008
OIL00091*GD	October 2008	015	pH	1/2Weeks	1	0	10/15/2008
OIL00091*GD	October 2008	015	Iron, Total (Fe)	1/2Weeks	1	0	10/15/2008
OIL00091*GD	October 2008	015	Manganese, Total (Mn)	1/2Weeks	1	0	10/15/2008
OIL00091*GD	October 2008	015	Residue, Total Dissolv	1/2Weeks	1	0	10/15/2008
OIL00091*GD	October 2008	015	Conductivity	1/2Weeks	1	0	10/15/2008
OIL00091*GD	January 2007	008	Conductivity	1/2Weeks	1	0	01/01/2007
OIL00091*GD	January 2007	017	Color, Severity	1/Day	1	0	01/01/2007
OIL00091*GD	January 2007	017	Color, Severity	1/Day	1	0	01/02/2007
OIL00091*GD	January 2007	017	Turbidity, Severity	1/Day	1	0	01/22/2007
OIL00091*GD	January 2007	017	Odor, Severity	1/Day	1	0	01/30/2007
OIL00091*GD	February 2007	017	Color, Severity	1/Day	1	0	02/09/2007
OIL00091*GD	February 2007	017	Color, Severity	1/Day	1	0	02/23/2007
OIL00091*GD	March 2007	017	Odor, Severity	1/Day	1	0	03/01/2007

OIL00091*GD	March 2007	017	Odor, Severity	1/Day	1	0	03/03/2007
OIL00091*GD	March 2007	017	Odor, Severity	1/Day	1	0	03/04/2007
OIL00091*GD	March 2007	017	Turbidity, Severity	1/Day	1	0	03/05/2007
OIL00091*GD	March 2007	017	Color, Severity	1/Day	1	0	03/17/2007
OIL00091*GD	March 2007	017	Odor, Severity	1/Day	1	0	03/29/2007
OIL00091*GD	April 2007	017	Odor, Severity	1/Day	1	0	04/19/2007
OIL00091*GD	April 2007	017	Color, Severity	1/Day	1	0	04/27/2007
OIL00091*GD	May 2007	017	Turbidity, Severity	1/Day	1	0	05/04/2007
OIL00091*GD	June 2007	017	Color, Severity	1/Day	1	0	06/05/2007
OIL00091*GD	June 2007	017	Turbidity, Severity	1/Day	1	0	06/05/2007
OIL00091*GD	June 2007	017	Odor, Severity	1/Day	1	0	06/27/2007
OIL00091*GD	June 2007	017	Odor, Severity	1/Day	1	0	06/28/2007
OIL00091*GD	June 2007	017	Turbidity, Severity	1/Day	1	0	06/29/2007
OIL00091*GD	July 2007	017	Color, Severity	1/Day	1	0	07/03/2007
OIL00091*GD	July 2007	017	Odor, Severity	1/Day	1	0	07/03/2007
OIL00091*GD	July 2007	017	Turbidity, Severity	1/Day	1	0	07/19/2007
OIL00091*GD	August 2007	017	Color, Severity	1/Day	1	0	08/05/2007
OIL00091*GD	August 2007	017	Turbidity, Severity	1/Day	1	0	08/05/2007
OIL00091*GD	August 2007	017	Odor, Severity	1/Day	1	0	08/26/2007
OIL00091*GD	September 2007	017	Odor, Severity	1/Day	1	0	09/22/2007
OIL00091*GD	November 2007	017	Turbidity, Severity	1/Day	1	0	11/03/2007
OIL00091*GD	November 2007	017	Turbidity, Severity	1/Day	1	0	11/17/2007
OIL00091*GD	December 2007	017	Turbidity, Severity	1/Day	1	0	12/02/2007
OIL00091*GD	January 2007	017	Odor, Severity	1/Day	1	0	01/26/2007
OIL00091*GD	February 2007	017	Odor, Severity	1/Day	1	0	02/02/2007
OIL00091*GD	February 2007	017	Turbidity, Severity	1/Day	1	0	02/21/2007
OIL00091*GD	March 2007	017	Odor, Severity	1/Day	1	0	03/06/2007
OIL00091*GD	March 2007	017	Turbidity, Severity	1/Day	1	0	03/18/2007
OIL00091*GD	March 2007	017	Odor, Severity	1/Day	1	0	03/21/2007
OIL00091*GD	March 2007	017	Odor, Severity	1/Day	1	0	03/26/2007
OIL00091*GD	April 2007	017	Color, Severity	1/Day	1	0	04/04/2007
OIL00091*GD	May 2007	017	Odor, Severity	1/Day	1	0	05/01/2007
OIL00091*GD	May 2007	017	Turbidity, Severity	1/Day	1	0	05/05/2007
OIL00091*GD	May 2007	017	Odor, Severity	1/Day	1	0	05/18/2007
OIL00091*GD	June 2007	017	Turbidity, Severity	1/Day	1	0	06/09/2007
OIL00091*GD	June 2007	017	Odor, Severity	1/Day	1	0	06/11/2007
OIL00091*GD	July 2007	017	Odor, Severity	1/Day	1	0	07/01/2007
OIL00091*GD	July 2007	017	Color, Severity	1/Day	1	0	07/23/2007
OIL00091*GD	July 2007	017	Odor, Severity	1/Day	1	0	07/26/2007
OIL00091*GD	August 2007	017	Color, Severity	1/Day	1	0	08/25/2007
OIL00091*GD	September 2007	017	Odor, Severity	1/Day	1	0	09/01/2007
OIL00091*GD	September 2007	017	Odor, Severity	1/Day	1	0	09/15/2007
OIL00091*GD	November 2007	017	Odor, Severity	1/Day	1	0	11/25/2007
OIL00091*GD	December 2007	017	Odor, Severity	1/Day	1	0	12/25/2007